Milliman
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November 2015

Gaston Rural Fire Protection District/2608
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

November 2015
Gaston Rural Fire Protection District/2608

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

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

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

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

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

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

Sincerely,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Gaston Rural Fire Protection District -- #2608

November 2015

CONTENTS

Executive Summary

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

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Gaston Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Gaston Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.49%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	2.42%	2.42%	2.42%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.92%**	**11.53%**	**16.33%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.42%**	**11.96%**	**16.76%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 84%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	13.91%	13.91%
Minimum 2017-2019 Rate	10.91%	7.91%
Maximum 2017-2019 Rate	16.91%	19.91%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$323,110	$371,017	$47,907	87%	$85,462	56%
12/31/2010	341,306	375,975	34,669	91%	100,211	35%
12/31/2011	330,317	371,521	41,204	89%	100,398	41%
12/31/2012	365,393	380,080	14,687	96%	101,729	14%
12/31/2013	402,978	416,448	13,470	97%	108,497	12%
12/31/2014	408,532	484,761	76,229	84%	108,279	70%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Gaston Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$76,229	$13,469
Allocated pooled OPSRP UAL	12,379	7,671
Side account	0	0
Net unfunded pension actuarial accrued liability	88,608	21,140
Combined valuation payroll	108,279	108,497
Net pension UAL as a percentage of payroll	82%	19%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$861	$1,502

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$171	$58
Tier 1/Tier 2 valuation payroll	1,180	449
Tier 1/Tier 2 pension normal cost rate	14.49%	12.92%
Tier 1/ Tier 2 Actuarial accrued liability	$484,761	$416,448
Actuarial asset value	408,532	402,979
Tier 1/Tier 2 Unfunded actuarial accrued liability	76,229	13,469
Tier 1/ Tier 2 Funded status	84%	97%
Combined valuation payroll	$108,279	$108,497
Tier 1/Tier 2 UAL as a percentage of payroll	70%	12%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	2.42%	0.99%
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	2	2

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	108,279	108,497
3. Amortization factor	10.118	10.703
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$45,211	$42,506
2. Employer reserves	241,950	227,434
3. Benefits in force reserve	121,372	133,039
4. Total market value of assets ***(1. + 2. + 3.)***	**$408,532**	**$402,979**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$402,979
2.	Regular employer contributions	(1,775)
3.	Benefit payments and expense	(20,045)
4.	Adjustments [1]	(29)
5.	Interest credited	27,404
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$408,532**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	88	45
Tier 2 Police & Fire	83	13
Tier 2 General Service	0	0
Total	**$171**	**$58**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$138	$171	$33

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$191,795	$146,127
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	29,083	33,752
▪ Tier 2 General Service	26,668	20,477
▪ **Total Active Members**	**$247,546**	**$200,356**
Dormant Members	1,757	1,639
Retired Members and Beneficiaries	235,458	214,453
Total Actuarial Accrued Liability	**$484,761**	**$416,448**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$433,497	$484,761	$51,264

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$484,761	$416,448
2. Actuarial value of assets	408,532	402,979
3. Unfunded accrued liability *(1. – 2.)*	76,229	13,469
4. Funded percentage *(2. ÷ 1.)*	84%	97%
5. Combined valuation payroll	$108,279	$108,497
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	70%	12%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$13,469	$975	$1,004	$13,498	$1,011
December 31, 2014	N/A	N/A	N/A	$62,731	$4,539
Total				**$76,229**	**$5,550**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$416,448
b. Normal cost at December 31, 2013	58
c. Benefit payments during 2014	(19,891)
d. Interest at 7.75% to December 31, 2014	31,506
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	428,121
f. Change in actuarial accrued liability due to assumption, method, and plan changes	51,264
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	479,385
2. Actuarial accrued liability at December 31, 2014	484,761
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(5,376)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	402,979
b. Contributions for 2014[1]	(1,775)
c. Benefit payments and expenses during 2014	(20,045)
d. Interest at 7.75% to December 31, 2014	30,385
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	411,543
5. Actuarial value of assets at December 31, 2014	408,532
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(3,011)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($8,387)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$13,469**
2. Expected increase	3,109
3. Liability (gain)/loss	5,376
4. Asset (gain)/loss	3,011
5. Change due to changes in assumptions, methods, and plan provisions	51,264
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$76,229**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	88	501	17.56%	45	324	13.89%
Tier 2 Police & Fire	83	679	12.22%	13	125	10.40%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$171**	**$1,180**	**14.49%**	**$58**	**$449**	**12.92%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$76,229	$13,469
2. Next year's Tier 1/Tier 2 UAL payment	5,550	975
3. Combined valuation payroll	108,279	108,497
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.13%	0.90%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.49%	12.92%
b. Tier 1/Tier 2 UAL rate	5.13%	0.90%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.77%	13.97%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.91%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.91%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.78%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	84%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.91%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	16.91%
7. Advisory July 1, 2017 total pension rate, before adjustment	19.77%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.86%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	5.13%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	2.27%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	16.91%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.49%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.49%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.91%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.49%	12.92%
b. Tier 1/Tier 2 UAL rate	2.27%	0.84%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	16.91%	13.91%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$501	$0	$501
Tier 2	0	679	679
Tier 1/Tier 2 valuation payroll	501	679	1,180
OPSRP valuation payroll	15,349	91,750	107,099
Combined valuation payroll	**$15,850**	**$92,429**	**$108,279**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	0	3	3	0	0	3	3
Total	0	0	4	4	0	0	4	4
Active Members with previous service segments with the employer								
General Service	1	1	N/A	2	1	1	N/A	2
Police & Fire	3	3	N/A	6	3	3	N/A	6
Total	4	4	N/A	8	4	4	N/A	8
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	1	0	1	0	1	0	1
Total	0	1	0	1	0	1	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	0	0	2	2	0	0	2
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**6**	**5**	**4**	**15**	**6**	**5**	**4**	**15**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

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

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	146
60-64		
65-69		
70-74		
75+		
Total	1	146

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	154
70-74		
75-79		
80-84	1	2,104
85-89		
90-94		
95-99		
100+		
Total	2	1,129

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Halsey Shedd Rural Fire Protection District/2698
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

November 2015
Halsey Shedd Rural Fire Protection District/2698

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Halsey Shedd Rural Fire Protection District -- #2698

November 2015

CONTENTS

Executive Summary

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

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Halsey Shedd Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Halsey Shedd Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	21.02%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(9.64%)	(9.64%)	(9.64%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.39%**	**0.00%**	**4.27%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**12.89%**	**0.43%**	**4.70%**

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

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

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 116%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	8.38%	8.38%
Minimum 2017-2019 Rate	5.38%	2.38%
Maximum 2017-2019 Rate	11.38%	14.38%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$476,525	$409,622	($66,903)	116%	$122,435	(55%)
12/31/2010	530,634	425,296	(105,338)	125%	81,326	(130%)
12/31/2011	547,694	449,945	(97,749)	122%	108,670	(90%)
12/31/2012	613,020	480,877	(132,143)	127%	139,713	(95%)
12/31/2013	698,072	521,710	(176,362)	134%	144,016	(122%)
12/31/2014	742,316	639,782	(102,534)	116%	148,848	(69%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Halsey Shedd Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	($102,534)	($176,362)
Allocated pooled OPSRP UAL	17,017	10,183
Side account	0	0
Net unfunded pension actuarial accrued liability	(85,517)	(166,179)
Combined valuation payroll	148,848	144,016
Net pension UAL as a percentage of payroll	(57%)	(115%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,183	$1,993

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$19,195	$15,150
Tier 1/Tier 2 valuation payroll	91,302	88,649
Tier 1/Tier 2 pension normal cost rate	21.02%	17.09%
Tier 1/ Tier 2 Actuarial accrued liability	$639,782	$521,710
Actuarial asset value	742,316	698,072
Tier 1/Tier 2 Unfunded actuarial accrued liability	(102,534)	(176,362)
Tier 1/ Tier 2 Funded status	116%	134%
Combined valuation payroll	$148,848	$144,016
Tier 1/Tier 2 UAL as a percentage of payroll	(69%)	(122%)
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(9.64%)	(8.71%)
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	2	2

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	148,848	144,016
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$164,395	$153,638
2. Employer reserves	524,263	488,432
3. Benefits in force reserve	53,658	56,002
4. Total market value of assets ***(1. + 2. + 3.)***	**$742,316**	**$698,072**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$698,072
2. Regular employer contributions	432
3. Benefit payments and expense	(8,862)
4. Adjustments [1]	2,509
5. Interest credited	50,165
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$742,316**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$16,582	$13,326
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	2,613	1,824
Total	**$19,195**	**$15,150**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$15,988	$19,195	$3,207

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$484,675	$385,032
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	11,438	14,166
▪ Tier 2 General Service	39,573	32,239
▪ **Total Active Members**	**$535,686**	**$431,437**
Dormant Members	0	0
Retired Members and Beneficiaries	104,096	90,273
Total Actuarial Accrued Liability	**$639,782**	**$521,710**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$563,109	$639,782	$76,673

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$639,782	$521,710
2. Actuarial value of assets	742,316	698,072
3. Unfunded accrued liability *(1. – 2.)*	(102,534)	(176,362)
4. Funded percentage *(2. ÷ 1.)*	116%	134%
5. Combined valuation payroll	$148,848	$144,016
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(69%)	(122%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($176,362)	($12,765)	($13,141)	($176,738)	($13,239)
December 31, 2014	N/A	N/A	N/A	$74,204	$5,369
Total				**($102,534)**	**($7,870)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$521,710
b. Normal cost at December 31, 2013	15,150
c. Benefit payments during 2014	(8,794)
d. Interest at 7.75% to December 31, 2014	40,679
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	568,745
f. Change in actuarial accrued liability due to assumption, method, and plan changes	76,673
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	645,418
2. Actuarial accrued liability at December 31, 2014	639,782
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	5,636
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	698,072
b. Contributions for 2014[1]	432
c. Benefit payments and expenses during 2014	(8,862)
d. Interest at 7.75% to December 31, 2014	53,774
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	743,415
5. Actuarial value of assets at December 31, 2014	742,316
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,100)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$4,536**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($176,362)**
2. Expected increase	1,691
3. Liability (gain)/loss	(5,636)
4. Asset (gain)/loss	1,100
5. Change due to changes in assumptions, methods, and plan provisions	76,673
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**($102,534)**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$16,582	$74,219	22.34%	$13,326	$72,092	18.48%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	2,613	17,083	15.30%	1,824	16,557	11.02%
Total	**$19,195**	**$91,302**	**21.02%**	**$15,150**	**$88,649**	**17.09%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	($102,534)	($176,362)
2. Next year's Tier 1/Tier 2 UAL payment	(7,870)	(12,765)
3. Combined valuation payroll	148,848	144,016
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(5.29%)	(8.86%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	21.02%	17.09%
b. Tier 1/Tier 2 UAL rate	(5.29%)	(8.86%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.88%	8.38%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.38%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.38%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.68%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	116%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.38%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	11.38%
7. Advisory July 1, 2017 total pension rate, before adjustment	15.88%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.50%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	(5.29%)
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(9.79%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	11.38%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	21.02%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	21.02%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.38%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	21.02%	17.09%
b. Tier 1/Tier 2 UAL rate	(9.79%)	(8.86%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	11.38%	8.38%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$74,219	$74,219
Tier 2	17,083	0	17,083
Tier 1/Tier 2 valuation payroll	17,083	74,219	91,302
OPSRP valuation payroll	0	57,546	57,546
Combined valuation payroll	**$17,083**	**$131,765**	**$148,848**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	1	0	1	2	1	0	1	2
Total	1	1	1	3	1	1	1	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	1	N/A	1	0	1	N/A	1
Total	0	1	N/A	1	0	1	N/A	1
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	2	0	0	2	2	0	0	2
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**3**	**2**	**1**	**6**	**3**	**2**	**1**	**6**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

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

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

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

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74	2	273
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	273

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Harbor Water PUD/2771
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

November 2015
Harbor Water PUD/2771

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Harbor Water PUD -- #2771

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Harbor Water PUD to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Harbor Water PUD.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Harbor Water PUD

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	20.94%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(8.90%)	(8.90%)	(8.90%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.05%**	**0.21%**	**5.01%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**13.55%**	**0.64%**	**5.44%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 121%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	9.04%	9.04%
Minimum 2017-2019 Rate	6.04%	3.04%
Maximum 2017-2019 Rate	12.04%	15.04%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$585,164	$519,548	($65,616)	113%	$244,669	(27%)
12/31/2010	661,768	565,410	(96,358)	117%	243,658	(40%)
12/31/2011	685,356	635,506	(49,850)	108%	241,212	(21%)
12/31/2012	796,837	667,827	(129,010)	119%	285,733	(45%)
12/31/2013	919,744	695,744	(224,000)	132%	291,782	(77%)
12/31/2014	991,048	820,895	(170,153)	121%	327,589	(52%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Harbor Water PUD

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	($170,153)	($224,000)
Allocated pooled OPSRP UAL	37,451	20,631
Side account	0	0
Net unfunded pension actuarial accrued liability	(132,702)	(203,369)
Combined valuation payroll	327,589	291,782
Net pension UAL as a percentage of payroll	(41%)	(70%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,604	$4,039

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$47,167	$32,633
Tier 1/Tier 2 valuation payroll	225,291	225,861
Tier 1/Tier 2 pension normal cost rate	20.94%	14.45%
Tier 1/ Tier 2 Actuarial accrued liability	$820,895	$695,744
Actuarial asset value	991,048	919,744
Tier 1/Tier 2 Unfunded actuarial accrued liability	(170,153)	(224,000)
Tier 1/ Tier 2 Funded status	121%	132%
Combined valuation payroll	$327,589	$291,782
Tier 1/Tier 2 UAL as a percentage of payroll	(52%)	(77%)
Tier 1/Tier 2 UAL rate	(8.90%)	(5.41%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	1	1

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	327,589	291,782
3. Amortization factor	10.118	10.703
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$252,020	$234,800
2. Employer reserves	712,510	656,509
3. Benefits in force reserve	26,518	28,435
4. Total market value of assets ***(1. + 2. + 3.)***	**$991,048**	**$919,744**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$919,744
2.	Regular employer contributions	8,021
3.	Benefit payments and expense	(4,380)
4.	Adjustments [1]	(32)
5.	Interest credited	67,694
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$991,048**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	36,553	23,905
Tier 2 Police & Fire	0	0
Tier 2 General Service	10,614	8,728
Total	**$47,167**	**$32,633**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$39,790	$47,167	$7,377

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	627,110	534,617
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	142,342	115,290
▪ **Total Active Members**	**$769,452**	**$649,907**
Dormant Members	0	0
Retired Members and Beneficiaries	51,443	45,837
Total Actuarial Accrued Liability	**$820,895**	**$695,744**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$721,520	$820,895	$99,375

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$820,895	$695,744
2. Actuarial value of assets	991,048	919,744
3. Unfunded accrued liability *(1. – 2.)*	(170,153)	(224,000)
4. Funded percentage *(2. ÷ 1.)*	121%	132%
5. Combined valuation payroll	$327,589	$291,782
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(52%)	(77%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($224,000)	($16,213)	($16,691)	($224,478)	($16,815)
December 31, 2014	N/A	N/A	N/A	$54,325	$3,931
Total				**($170,153)**	**($12,884)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$695,744
b. Normal cost at December 31, 2013	32,633
c. Benefit payments during 2014	(4,346)
d. Interest at 7.75% to December 31, 2014	55,016
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	779,047
f. Change in actuarial accrued liability due to assumption, method, and plan changes	99,375
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	878,422
2. Actuarial accrued liability at December 31, 2014	820,895
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	57,527
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	919,744
b. Contributions for 2014[1]	8,021
c. Benefit payments and expenses during 2014	(4,380)
d. Interest at 7.75% to December 31, 2014	71,421
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	994,807
5. Actuarial value of assets at December 31, 2014	991,048
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(3,759)
7. Total actuarial gain/(loss) *(3. + 6.)*	**$53,768**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($224,000)**
2. Expected increase	8,240
3. Liability (gain)/loss	(57,527)
4. Asset (gain)/loss	3,759
5. Change due to changes in assumptions, methods, and plan provisions	99,375
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**($170,153)**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	36,553	159,717	22.89%	23,905	159,591	14.98%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	10,614	65,574	16.19%	8,728	66,270	13.17%
Total	**$47,167**	**$225,291**	**20.94%**	**$32,633**	**$225,861**	**14.45%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	($170,153)	($224,000)
2. Next year's Tier 1/Tier 2 UAL payment	(12,884)	(16,213)
3. Combined valuation payroll	327,589	291,782
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(3.93%)	(5.56%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.94%	14.45%
b. Tier 1/Tier 2 UAL rate	(3.93%)	(5.56%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.16%	9.04%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.04%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.04%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.81%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	121%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.04%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	12.04%
7. Advisory July 1, 2017 total pension rate, before adjustment	17.16%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.12%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	(3.93%)
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(9.05%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	12.04%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	20.94%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	20.94%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.04%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.94%	14.45%
b. Tier 1/Tier 2 UAL rate	(9.05%)	(5.56%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	12.04%	9.04%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$159,717	$0	$159,717
Tier 2	65,574	0	65,574
Tier 1/Tier 2 valuation payroll	225,291	0	225,291
OPSRP valuation payroll	102,298	0	102,298
Combined valuation payroll	**$327,589**	**$0**	**$327,589**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	1	2	5	2	1	2	5
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	2	5	2	1	2	5
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Grand Total Number of Members	**2**	**2**	**2**	**6**	**2**	**2**	**2**	**6**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54					1					**1**
55-59										
60-64			1							**1**
65-69					1					**1**
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**3**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

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

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	1	352
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	352

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Hermiston Rural Fire Protection District/2815
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

Milliman

November 2015
Hermiston Rural Fire Protection District/2815

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Hermiston Rural Fire Protection District -- #2815

November 2015

CONTENTS

Executive Summary

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

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Hermiston Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Hermiston Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	19.30%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(0.63%)	(0.63%)	(0.63%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**19.68%**	**8.48%**	**13.28%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**20.18%**	**8.91%**	**13.71%**

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

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

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 71%.

Funded Status as of December 31, 2015	**70% to 130%**	**Under 60% or Over 140%**
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	15.56%	15.56%
Minimum 2017-2019 Rate	12.45%	9.34%
Maximum 2017-2019 Rate	18.67%	21.78%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$2,571,679	$3,104,973	$533,294	83%	$1,788,434	30%
12/31/2010	3,094,148	3,421,790	327,642	90%	1,825,539	18%
12/31/2011	3,353,245	3,852,024	498,779	87%	1,943,699	26%
12/31/2012	4,033,745	4,582,248	548,503	88%	2,169,710	25%
12/31/2013	4,709,799	4,971,080	261,281	95%	2,131,800	12%
12/31/2014	4,918,246	6,949,344	2,031,098	71%	2,207,387	92%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Hermiston Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$2,031,098	$261,281
Allocated pooled OPSRP UAL	252,352	150,731
Side account	0	0
Net unfunded pension actuarial accrued liability	2,283,450	412,012
Combined valuation payroll	2,207,387	2,131,800
Net pension UAL as a percentage of payroll	103%	19%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$17,546	$29,506

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$278,028	$215,693
Tier 1/Tier 2 valuation payroll	1,440,780	1,431,731
Tier 1/Tier 2 pension normal cost rate	19.30%	15.07%
Tier 1/ Tier 2 Actuarial accrued liability	$6,949,344	$4,971,080
Actuarial asset value	4,918,246	4,709,799
Tier 1/Tier 2 Unfunded actuarial accrued liability	2,031,098	261,281
Tier 1/ Tier 2 Funded status	71%	95%
Combined valuation payroll	$2,207,387	$2,131,800
Tier 1/Tier 2 UAL as a percentage of payroll	92%	12%
Tier 1/Tier 2 UAL rate	(0.63%)	0.49%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	15	16
Tier 1/Tier 2 dormant members	4	2
Tier 1/Tier 2 retirees and beneficiaries	9	7

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	2,207,387	2,131,800
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$419,506	$473,831
2. Employer reserves	3,301,699	3,561,211
3. Benefits in force reserve	1,197,041	674,757
4. Total market value of assets *(1. + 2. + 3.)*	**$4,918,246**	**$4,709,799**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$4,709,799
2.	Regular employer contributions	178,249
3.	Benefit payments and expense	(197,700)
4.	Adjustments [1]	(139,336)
5.	Interest credited	367,234
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$4,918,246**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Tier 1 Police & Fire	$99,085	$81,118
Tier 1 General Service	12,125	9,667
Tier 2 Police & Fire	166,818	124,908
Tier 2 General Service	0	0
Total	**$278,028**	**$215,693**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$227,493	$278,028	$50,535

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$1,636,804	$1,722,710
▪ Tier 1 General Service	180,007	133,440
▪ Tier 2 Police & Fire	2,635,639	1,967,433
▪ Tier 2 General Service	32,750	30,253
▪ **Total Active Members**	**$4,485,200**	**$3,853,836**
Dormant Members	141,915	29,559
Retired Members and Beneficiaries	2,322,229	1,087,685
Total Actuarial Accrued Liability	**$6,949,344**	**$4,971,080**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$6,017,937	$6,949,344	$931,407

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$6,949,344	$4,971,080
2. Actuarial value of assets	4,918,246	4,709,799
3. Unfunded accrued liability *(1. – 2.)*	2,031,098	261,281
4. Funded percentage *(2. ÷ 1.)*	71%	95%
5. Combined valuation payroll	$2,207,387	$2,131,800
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	92%	12%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$261,281	$18,911	$19,469	$261,839	$19,613
December 31, 2014	N/A	N/A	N/A	$1,769,259	$128,022
Total				**$2,031,098**	**$147,635**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$4,971,080
b. Normal cost at December 31, 2013	215,693
c. Benefit payments during 2014	(196,177)
d. Interest at 7.75% to December 31, 2014	386,015
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	5,376,611
f. Change in actuarial accrued liability due to assumption, method, and plan changes	931,407
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	6,308,018
2. Actuarial accrued liability at December 31, 2014	6,949,344
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(641,326)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	4,709,799
b. Contributions for 2014[1]	178,249
c. Benefit payments and expenses during 2014	(197,700)
d. Interest at 7.75% to December 31, 2014	364,256
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	5,054,604
5. Actuarial value of assets at December 31, 2014	4,918,246
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(136,358)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($777,684)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$261,281**
2. Expected increase	60,726
3. Liability (gain)/loss	641,326
4. Asset (gain)/loss	136,358
5. Change due to changes in assumptions, methods, and plan provisions	931,407
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$2,031,098**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$99,085	$486,447	20.37%	$81,118	$508,634	15.95%
Tier 1 General Service	12,125	64,927	18.67%	9,667	61,790	15.64%
Tier 2 Police & Fire	166,818	889,406	18.76%	124,908	861,307	14.50%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$278,028**	**$1,440,780**	**19.30%**	**$215,693**	**$1,431,731**	**15.07%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$2,031,098	$261,281
2. Next year's Tier 1/Tier 2 UAL payment	147,635	18,911
3. Combined valuation payroll	2,207,387	2,131,800
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.69%	0.89%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.30%	15.07%
b. Tier 1/Tier 2 UAL rate	6.69%	0.89%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	26.14%	16.11%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	15.56%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	15.56%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.11%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.11%
c. Funded percentage	71%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.11%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	12.45%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	18.67%
7. Advisory July 1, 2017 total pension rate, before adjustment	26.14%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(7.47%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	6.69%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.78%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	18.67%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	19.30%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	19.30%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	18.67%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.30%	15.07%
b. Tier 1/Tier 2 UAL rate	(0.78%)	0.34%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	18.67%	15.56%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$64,927	$486,447	$551,374
Tier 2	0	889,406	889,406
Tier 1/Tier 2 valuation payroll	64,927	1,375,853	1,440,780
OPSRP valuation payroll	39,551	727,056	766,607
Combined valuation payroll	**$104,478**	**$2,102,909**	**$2,207,387**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	1	2	1	0	1	2
Police & Fire	4	10	9	23	5	10	10	25
Total	5	10	10	25	6	10	11	27
Active Members with previous service segments with the employer								
General Service	1	1	N/A	2	1	1	N/A	2
Police & Fire	1	5	N/A	6	2	6	N/A	8
Total	2	6	N/A	8	3	7	N/A	10
Dormant Members								
General Service	0	1	0	1	0	1	0	1
Police & Fire	2	1	1	4	1	0	1	2
Total	2	2	1	5	1	1	1	3
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	9	0	0	9	7	0	0	7
Total	9	0	0	9	7	0	0	7
Grand Total Number of Members	**18**	**18**	**11**	**47**	**17**	**18**	**12**	**47**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			3							3
40-44			2							2
45-49			3	1	1					5
50-54			1		1	1				3
55-59			1							1
60-64						1				1
65-69										
70-74										
75+										
Total	0	0	10	1	2	2	0	0	0	15

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	202
50-54	1	179
55-59	1	504
60-64	1	99
65-69		
70-74		
75+		
Total	4	246

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	2	2,588
55-59	2	916
60-64	3	1,640
65-69	1	1
70-74	1	435
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	9	1,374

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Ice Fountain Water District/2717
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

November 2015
Ice Fountain Water District/2717

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Ice Fountain Water District -- #2717

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Ice Fountain Water District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Ice Fountain Water District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Ice Fountain Water District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.86%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(0.15%)	(0.15%)	(0.15%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.72%**	**8.96%**	**13.76%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**16.22%**	**9.39%**	**14.19%**

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

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

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 91%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	11.71%	11.71%
Minimum 2017-2019 Rate	8.71%	5.71%
Maximum 2017-2019 Rate	14.71%	17.71%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$602,075	$649,537	$47,462	93%	$169,216	28%
12/31/2010	642,750	676,412	33,662	95%	180,977	19%
12/31/2011	636,512	704,868	68,356	90%	223,782	31%
12/31/2012	708,964	738,703	29,739	96%	236,893	13%
12/31/2013	794,979	776,808	(18,171)	102%	206,630	(9%)
12/31/2014	820,816	897,711	76,895	91%	305,250	25%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Ice Fountain Water District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$76,895	($18,171)
Allocated pooled OPSRP UAL	34,897	14,610
Side account	0	0
Net unfunded pension actuarial accrued liability	111,792	(3,561)
Combined valuation payroll	305,250	206,630
Net pension UAL as a percentage of payroll	37%	(2%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,426	$2,860

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$15,594	$12,799
Tier 1/Tier 2 valuation payroll	104,960	101,972
Tier 1/Tier 2 pension normal cost rate	14.86%	12.55%
Tier 1/ Tier 2 Actuarial accrued liability	$897,711	$776,808
Actuarial asset value	820,816	794,979
Tier 1/Tier 2 Unfunded actuarial accrued liability	76,895	(18,171)
Tier 1/ Tier 2 Funded status	91%	102%
Combined valuation payroll	$305,250	$206,630
Tier 1/Tier 2 UAL as a percentage of payroll	25%	(9%)
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(0.15%)	(0.84%)
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	3	3

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	305,250	206,630
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$111,186	$104,048
2. Employer reserves	477,357	439,779
3. Benefits in force reserve	232,273	251,152
4. Total market value of assets ***(1. + 2. + 3.)***	**$820,816**	**$794,979**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$794,979
2.	Regular employer contributions	5,516
3.	Benefit payments and expense	(38,362)
4.	Adjustments [1]	3,254
5.	Interest credited	55,428
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$820,816**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	15,594	12,799
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$15,594**	**$12,799**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$13,327	$15,594	$2,267

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	447,108	371,961
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$447,108**	**$371,961**
Dormant Members	0	0
Retired Members and Beneficiaries	450,603	404,847
Total Actuarial Accrued Liability	**$897,711**	**$776,808**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$803,830	$897,711	$93,881

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$897,711	$776,808
2. Actuarial value of assets	820,816	794,979
3. Unfunded accrued liability *(1. – 2.)*	76,895	(18,171)
4. Funded percentage *(2. ÷ 1.)*	91%	102%
5. Combined valuation payroll	$305,250	$206,630
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	25%	(9%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($18,171)	($1,315)	($1,354)	($18,210)	($1,364)
December 31, 2014	N/A	N/A	N/A	$95,105	$6,882
Total				**$76,895**	**$5,518**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$776,808
b. Normal cost at December 31, 2013	12,799
c. Benefit payments during 2014	(38,066)
d. Interest at 7.75% to December 31, 2014	59,224
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	810,765
f. Change in actuarial accrued liability due to assumption, method, and plan changes	93,881
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	904,646
2. Actuarial accrued liability at December 31, 2014	897,711
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	6,935
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	794,979
b. Contributions for 2014[1]	5,516
c. Benefit payments and expenses during 2014	(38,362)
d. Interest at 7.75% to December 31, 2014	60,338
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	822,472
5. Actuarial value of assets at December 31, 2014	820,816
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,656)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$5,279**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($18,171)**
2. Expected increase	6,464
3. Liability (gain)/loss	(6,935)
4. Asset (gain)/loss	1,656
5. Change due to changes in assumptions, methods, and plan provisions	93,881
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$76,895**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	15,594	104,960	14.86%	12,799	101,972	12.55%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$15,594**	**$104,960**	**14.86%**	**$12,799**	**$101,972**	**12.55%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$76,895	($18,171)
2. Next year's Tier 1/Tier 2 UAL payment	5,518	(1,315)
3. Combined valuation payroll	305,250	206,630
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.81%	(0.64%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.86%	12.55%
b. Tier 1/Tier 2 UAL rate	1.81%	(0.64%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.82%	12.06%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	11.71%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.71%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	2.34%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
	c. Funded percentage	91%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5.	Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.71%
6.	Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	14.71%
7.	Advisory July 1, 2017 total pension rate, before adjustment	16.82%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.11%)
9.	Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	1.81%
10.	Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.30%)
11.	Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	14.71%
12.	Tier 1/Tier 2 retiree healthcare rate	0.50%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14.	Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.86%
15.	Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.86%
16.	Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.71%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.86%	12.55%
b. Tier 1/Tier 2 UAL rate	(0.30%)	(0.99%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	14.71%	11.71%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$104,960	$0	$104,960
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	104,960	0	104,960
OPSRP valuation payroll	200,290	0	200,290
Combined valuation payroll	**$305,250**	**$0**	**$305,250**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	4	5	1	0	2	3
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	4	5	1	0	2	3
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	3	0	0	3	3	0	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	3	0	0	3	3	0	0	3
Grand Total Number of Members	**4**	**0**	**4**	**8**	**4**	**0**	**2**	**6**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

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

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

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

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	2	1,411
70-74		
75-79		
80-84	1	433
85-89		
90-94		
95-99		
100+		
Total	3	1,085

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.
- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.
- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.
- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.
- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Jackson County Fire District #5/2556
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

November 2015
Jackson County Fire District #5/2556

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Jackson County Fire District #5 -- #2556

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Jackson County Fire District #5 to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jackson County Fire District #5.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Jackson County Fire District #5

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	20.60%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	1.91%	1.91%	1.91%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**23.52%**	**11.02%**	**15.82%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**24.02%**	**11.45%**	**16.25%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 79%.

Funded Status as of December 31, 2015	**70% to 130%**	**Under 60% or Over 140%**
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	18.76%	18.76%
Minimum 2017-2019 Rate	15.01%	11.26%
Maximum 2017-2019 Rate	22.51%	26.26%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$11,458,597	$13,191,131	$1,732,534	87%	$1,937,662	89%
12/31/2010	12,338,988	14,587,295	2,248,307	85%	2,158,071	104%
12/31/2011	11,630,678	14,920,503	3,289,825	78%	2,094,912	157%
12/31/2012	12,643,144	15,114,250	2,471,106	84%	2,256,324	110%
12/31/2013	14,169,543	15,674,310	1,504,767	90%	2,407,905	62%
12/31/2014	14,840,834	18,877,511	4,036,677	79%	2,255,075	179%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Jackson County Fire District #5

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$4,036,677	$1,504,767
Allocated pooled OPSRP UAL	257,804	170,254
Side account	0	0
Net unfunded pension actuarial accrued liability	4,294,481	1,675,021
Combined valuation payroll	2,255,075	2,407,905
Net pension UAL as a percentage of payroll	190%	70%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$17,925	$33,328

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$251,604	$253,066
Tier 1/Tier 2 valuation payroll	1,221,306	1,423,886
Tier 1/Tier 2 pension normal cost rate	20.60%	17.77%
Tier 1/ Tier 2 Actuarial accrued liability	$18,877,511	$15,674,310
Actuarial asset value	14,840,834	14,169,543
Tier 1/Tier 2 Unfunded actuarial accrued liability	4,036,677	1,504,767
Tier 1/ Tier 2 Funded status	79%	90%
Combined valuation payroll	$2,255,075	$2,407,905
Tier 1/Tier 2 UAL as a percentage of payroll	179%	62%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	1.91%	0.99%
Tier 1/Tier 2 active members [1]	14	15
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	23	22

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	2,255,075	2,407,905
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$1,789,370	$1,725,802
2. Employer reserves	7,398,904	6,723,585
3. Benefits in force reserve	5,652,561	5,720,156
4. Total market value of assets ***(1. + 2. + 3.)***	**$14,840,834**	**$14,169,543**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$14,169,543
2. Regular employer contributions	244,366
3. Benefit payments and expense	(933,562)
4. Adjustments [1]	349,843
5. Interest credited	1,010,644
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$14,840,834**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$117,214	$145,383
Tier 1 General Service	0	0
Tier 2 Police & Fire	125,835	100,730
Tier 2 General Service	8,555	6,953
Total	**$251,604**	**$253,066**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$205,482	$251,604	$46,122

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$4,305,423	$4,685,519
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	1,784,172	1,352,112
▪ Tier 2 General Service	176,962	139,946
▪ **Total Active Members**	**$6,266,557**	**$6,177,577**
Dormant Members	1,645,126	276,042
Retired Members and Beneficiaries	10,965,828	9,220,691
Total Actuarial Accrued Liability	**$18,877,511**	**$15,674,310**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$16,197,052	$18,877,511	$2,680,459

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$18,877,511	$15,674,310
2. Actuarial value of assets	14,840,834	14,169,543
3. Unfunded accrued liability *(1. – 2.)*	4,036,677	1,504,767
4. Funded percentage *(2. ÷ 1.)*	79%	90%
5. Combined valuation payroll	$2,255,075	$2,407,905
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	179%	62%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$1,504,767	$108,915	$112,126	$1,507,978	$112,957
December 31, 2014	N/A	N/A	N/A	$2,528,699	$182,974
Total				**$4,036,677**	**$295,931**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$15,674,310
b. Normal cost at December 31, 2013	253,066
c. Benefit payments during 2014	(926,372)
d. Interest at 7.75% to December 31, 2014	1,188,668
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	16,189,672
f. Change in actuarial accrued liability due to assumption, method, and plan changes	2,680,459
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	18,870,131
2. Actuarial accrued liability at December 31, 2014	18,877,511
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(7,380)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	14,169,543
b. Contributions for 2014[1]	244,366
c. Benefit payments and expenses during 2014	(933,562)
d. Interest at 7.75% to December 31, 2014	1,071,433
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	14,551,780
5. Actuarial value of assets at December 31, 2014	14,840,834
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	289,054
7. Total actuarial gain/(loss) *(3. + 6.)*	**$281,674**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$1,504,767**
2. Expected increase	133,125
3. Liability (gain)/loss	7,380
4. Asset (gain)/loss	(289,054)
5. Change due to changes in assumptions, methods, and plan provisions	2,680,459
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$4,036,677**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$117,214	$480,581	24.39%	$145,383	$697,310	20.85%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	125,835	680,294	18.50%	100,730	667,158	15.10%
Tier 2 General Service	8,555	60,431	14.16%	6,953	59,418	11.70%
Total	**$251,604**	**$1,221,306**	**20.60%**	**$253,066**	**$1,423,886**	**17.77%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$4,036,677	$1,504,767
2. Next year's Tier 1/Tier 2 UAL payment	295,931	108,915
3. Combined valuation payroll	2,255,075	2,407,905
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	13.12%	4.52%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.60%	17.77%
b. Tier 1/Tier 2 UAL rate	13.12%	4.52%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	33.87%	22.44%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	18.76%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	18.76%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.75%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.75%
c. Funded percentage	79%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.75%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	15.01%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	22.51%
7. Advisory July 1, 2017 total pension rate, before adjustment	33.87%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(11.36%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	13.12%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.76%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	22.51%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	20.60%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	20.60%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	22.51%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.60%	17.77%
b. Tier 1/Tier 2 UAL rate	1.76%	0.84%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	22.51%	18.76%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$480,581	$480,581
Tier 2	60,431	680,294	740,725
Tier 1/Tier 2 valuation payroll	60,431	1,160,875	1,221,306
OPSRP valuation payroll	24,876	1,008,893	1,033,769
Combined valuation payroll	**$85,307**	**$2,169,768**	**$2,255,075**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	1	2	0	1	1	2
Police & Fire	6	7	12	25	7	7	12	26
Total	6	8	13	27	7	8	13	28
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	1	N/A	2	1	1	N/A	2
Total	1	1	N/A	2	1	1	N/A	2
Dormant Members								
General Service	0	0	0	0	1	0	0	1
Police & Fire	1	1	0	2	0	1	0	1
Total	1	1	0	2	1	1	0	2
Retired Members and Beneficiaries								
General Service	3	0	0	3	2	0	0	2
Police & Fire	20	0	0	20	20	0	0	20
Total	23	0	0	23	22	0	0	22
Grand Total Number of Members	**31**	**10**	**13**	**54**	**31**	**10**	**13**	**54**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			1							1
40-44		1	1	1						3
45-49			2							2
50-54				2	1	2				5
55-59					1		1			2
60-64										
65-69					1					1
70-74										
75+										
Total	0	1	4	3	3	2	1	0	0	14

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64	1	9,399
65-69		
70-74	1	1,346
75+		
Total	2	5,373

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	284
55-59	5	3,987
60-64	9	3,106
65-69	3	2,628
70-74	3	2,134
75-79		
80-84	1	796
85-89	1	251
90-94		
95-99		
100+		
Total	23	2,761

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Jefferson County Rural Fire Protection District #1/2575
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

Milliman

November 2015
Jefferson County Rural Fire Protection District #1/2575

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Jefferson County Rural Fire Protection District #1 -- #2575

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson County Rural Fire Protection District #1 to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County Rural Fire Protection District #1.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Jefferson County Rural Fire Protection District #1

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.78%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	1.28%	1.28%	1.28%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.07%**	**10.39%**	**15.19%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**17.57%**	**10.82%**	**15.62%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 85%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	13.06%	13.06%
Minimum 2017-2019 Rate	10.06%	7.06%
Maximum 2017-2019 Rate	16.06%	19.06%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$1,549,973	$1,693,055	$143,082	92%	$229,869	62%
12/31/2010	1,682,599	1,644,460	(38,139)	102%	256,314	(15%)
12/31/2011	1,590,509	1,837,042	246,533	87%	304,654	81%
12/31/2012	1,740,658	1,800,503	59,845	97%	300,941	20%
12/31/2013	1,872,829	1,921,988	49,159	97%	298,613	16%
12/31/2014	1,945,969	2,295,670	349,701	85%	310,549	113%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Jefferson County Rural Fire Protection District #1

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$349,701	$49,159
Allocated pooled OPSRP UAL	35,503	21,114
Side account	0	0
Net unfunded pension actuarial accrued liability	385,204	70,273
Combined valuation payroll	310,549	298,613
Net pension UAL as a percentage of payroll	124%	24%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,468	$4,133

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$9,882	$8,072
Tier 1/Tier 2 valuation payroll	66,842	65,685
Tier 1/Tier 2 pension normal cost rate	14.78%	12.29%
Tier 1/ Tier 2 Actuarial accrued liability	$2,295,670	$1,921,988
Actuarial asset value	1,945,969	1,872,829
Tier 1/Tier 2 Unfunded actuarial accrued liability	349,701	49,159
Tier 1/ Tier 2 Funded status	85%	97%
Combined valuation payroll	$310,549	$298,613
Tier 1/Tier 2 UAL as a percentage of payroll	113%	16%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	1.28%	0.77%
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	2	1
Tier 1/Tier 2 retirees and beneficiaries	6	6

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	310,549	298,613
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$138,187	$128,976
2. Employer reserves	875,607	803,643
3. Benefits in force reserve	932,175	940,211
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,945,969**	**$1,872,829**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$1,872,829
2.	Regular employer contributions	17,036
3.	Benefit payments and expense	(153,956)
4.	Adjustments [1]	77,904
5.	Interest credited	132,155
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,945,969**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	9,882	8,072
Tier 2 General Service	0	0
Total	**$9,882**	**$8,072**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$8,238	$9,882	$1,644

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	181,880	160,475
▪ Tier 2 Police & Fire	147,647	112,636
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$329,527**	**$273,111**
Dormant Members	157,747	133,291
Retired Members and Beneficiaries	1,808,396	1,515,586
Total Actuarial Accrued Liability	**$2,295,670**	**$1,921,988**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,976,485	$2,295,670	$319,185

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$2,295,670	$1,921,988
2. Actuarial value of assets	1,945,969	1,872,829
3. Unfunded accrued liability *(1. – 2.)*	349,701	49,159
4. Funded percentage *(2. ÷ 1.)*	85%	97%
5. Combined valuation payroll	$310,549	$298,613
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	113%	16%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$49,159	$3,558	$3,663	$49,264	$3,690
December 31, 2014	N/A	N/A	N/A	$300,437	$21,739
Total				**$349,701**	**$25,429**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$1,921,988
b. Normal cost at December 31, 2013	8,072
c. Benefit payments during 2014	(152,770)
d. Interest at 7.75% to December 31, 2014	143,347
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,920,637
f. Change in actuarial accrued liability due to assumption, method, and plan changes	319,185
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	2,239,822
2. Actuarial accrued liability at December 31, 2014	2,295,670
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(55,848)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	1,872,829
b. Contributions for 2014[1]	17,036
c. Benefit payments and expenses during 2014	(153,956)
d. Interest at 7.75% to December 31, 2014	139,839
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	1,875,749
5. Actuarial value of assets at December 31, 2014	1,945,969
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	70,220
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$14,372**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$49,159**
2. Expected increase	(4,271)
3. Liability (gain)/loss	55,848
4. Asset (gain)/loss	(70,220)
5. Change due to changes in assumptions, methods, and plan provisions	319,185
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$349,701**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	9,882	66,842	14.78%	8,072	65,685	12.29%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$9,882**	**$66,842**	**14.78%**	**$8,072**	**$65,685**	**12.29%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$349,701	$49,159
2. Next year's Tier 1/Tier 2 UAL payment	25,429	3,558
3. Combined valuation payroll	310,549	298,613
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	8.19%	1.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.78%	12.29%
b. Tier 1/Tier 2 UAL rate	8.19%	1.19%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	23.12%	13.63%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.06%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.06%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.61%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	85%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.06%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	16.06%
7. Advisory July 1, 2017 total pension rate, before adjustment	23.12%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(7.06%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	8.19%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.13%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	16.06%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.78%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.78%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.06%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.78%	12.29%
b. Tier 1/Tier 2 UAL rate	1.13%	0.62%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	16.06%	13.06%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	66,842	66,842
Tier 1/Tier 2 valuation payroll	0	66,842	66,842
OPSRP valuation payroll	0	243,707	243,707
Combined valuation payroll	**$0**	**$310,549**	**$310,549**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	1	3	4	0	1	3	4
Total	1	1	3	5	1	1	3	5
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	1	0	0	1	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	2	0	0	2	1	0	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	6	0	1	7	6	0	1	7
Total	6	0	1	7	6	0	1	7
Grand Total Number of Members	**9**	**1**	**4**	**14**	**8**	**1**	**4**	**13**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

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

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	2,095
50-54		
55-59	1	0
60-64		
65-69		
70-74		
75+		
Total	2	1,048

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	1,112
55-59	2	2,085
60-64	3	1,327
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	6	1,544

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Jefferson County Soil & Water Conservation District/2841
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

Milliman

November 2015
Jefferson County Soil & Water Conservation District/2841

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Jefferson County Soil & Water Conservation District -- #2841

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson County Soil & Water Conservation District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County Soil & Water Conservation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Jefferson County Soil & Water Conservation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	10.35%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	1.06%	1.06%	1.06%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.42%**	**10.17%**	**14.97%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**12.92%**	**10.60%**	**15.40%**

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

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

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 84%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	8.41%	8.41%
Minimum 2017-2019 Rate	5.41%	2.41%
Maximum 2017-2019 Rate	11.41%	14.41%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$140,414	$101,931	($38,483)	138%	$132,003	(29%)
12/31/2010	134,596	126,517	(8,079)	106%	115,888	(7%)
12/31/2011	132,805	131,462	(1,343)	101%	140,343	(1%)
12/31/2012	147,933	162,410	14,477	91%	185,702	8%
12/31/2013	167,632	175,485	7,853	96%	111,298	7%
12/31/2014	174,278	208,639	34,361	84%	191,735	18%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Jefferson County Soil & Water Conservation District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$34,361	$7,853
Allocated pooled OPSRP UAL	21,919	7,869
Side account	0	0
Net unfunded pension actuarial accrued liability	56,280	15,722
Combined valuation payroll	191,735	111,298
Net pension UAL as a percentage of payroll	29%	14%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,524	$1,540

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$6,431	$5,412
Tier 1/Tier 2 valuation payroll	62,151	60,307
Tier 1/Tier 2 pension normal cost rate	10.35%	8.97%
Tier 1/ Tier 2 Actuarial accrued liability	$208,639	$175,485
Actuarial asset value	174,278	167,632
Tier 1/Tier 2 Unfunded actuarial accrued liability	34,361	7,853
Tier 1/ Tier 2 Funded status	84%	96%
Combined valuation payroll	$191,735	$111,298
Tier 1/Tier 2 UAL as a percentage of payroll	18%	7%
Tier 1/Tier 2 UAL rate	1.06%	(0.56%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	1	1

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	191,735	111,298
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$19,460	$18,397
2. Employer reserves	113,003	103,901
3. Benefits in force reserve	41,815	45,334
4. Total market value of assets *(1. + 2. + 3.)*	**$174,278**	**$167,632**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$167,632
2.	Regular employer contributions	1,627
3.	Benefit payments and expense	(6,906)
4.	Adjustments [1]	321
5.	Interest credited	11,603
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$174,278**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	6,431	5,412
Total	**$6,431**	**$5,412**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$5,580	$6,431	$851

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	127,519	102,408
▪ **Total Active Members**	**$127,519**	**$102,408**
Dormant Members	0	0
Retired Members and Beneficiaries	81,120	73,077
Total Actuarial Accrued Liability	**$208,639**	**$175,485**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$188,530	$208,639	$20,109

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$208,639	$175,485
2. Actuarial value of assets	174,278	167,632
3. Unfunded accrued liability *(1. – 2.)*	34,361	7,853
4. Funded percentage *(2. ÷ 1.)*	84%	96%
5. Combined valuation payroll	$191,735	$111,298
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	18%	7%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$7,853	$568	$585	$7,870	$590
December 31, 2014	N/A	N/A	N/A	$26,491	$1,917
Total				**$34,361**	**$2,507**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$175,485
b. Normal cost at December 31, 2013	5,412
c. Benefit payments during 2014	(6,853)
d. Interest at 7.75% to December 31, 2014	13,544
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	187,588
f. Change in actuarial accrued liability due to assumption, method, and plan changes	20,109
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	207,697
2. Actuarial accrued liability at December 31, 2014	208,639
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(942)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	167,632
b. Contributions for 2014[1]	1,627
c. Benefit payments and expenses during 2014	(6,906)
d. Interest at 7.75% to December 31, 2014	12,787
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	175,141
5. Actuarial value of assets at December 31, 2014	174,278
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(863)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($1,805)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$7,853**
2. Expected increase	4,594
3. Liability (gain)/loss	942
4. Asset (gain)/loss	863
5. Change due to changes in assumptions, methods, and plan provisions	20,109
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$34,361**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	6,431	62,151	10.35%	5,412	60,307	8.97%
Total	**$6,431**	**$62,151**	**10.35%**	**$5,412**	**$60,307**	**8.97%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$34,361	$7,853
2. Next year's Tier 1/Tier 2 UAL payment	2,507	568
3. Combined valuation payroll	191,735	111,298
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.31%	0.51%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.35%	8.97%
b. Tier 1/Tier 2 UAL rate	1.31%	0.51%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	11.81%	9.63%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.68%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	84%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.41%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. Advisory July 1, 2017 total pension rate, before adjustment	11.81%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.40%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	1.31%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.91%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	11.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	10.35%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	10.35%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	10.35%	8.97%
b. Tier 1/Tier 2 UAL rate	0.91%	(0.71%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	11.41%	8.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	62,151	0	62,151
Tier 1/Tier 2 valuation payroll	62,151	0	62,151
OPSRP valuation payroll	129,584	0	129,584
Combined valuation payroll	**$191,735**	**$0**	**$191,735**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	3	4	0	1	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	3	4	0	1	1	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	1	1	2	0	1	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	1	1	2
Grand Total Number of Members	**0**	**2**	**4**	**6**	**0**	**2**	**2**	**4**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

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

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

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

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74	1	617
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	617

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

Milliman

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November 2015

Jefferson County/2006
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

November 2015
Jefferson County/2006

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

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

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

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

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

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

Sincerely,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Jefferson County -- #2006

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson County to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Jefferson County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.06%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	1.02%	1.02%	1.02%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**19.09%**	**10.13%**	**14.93%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**19.59%**	**10.56%**	**15.36%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 85%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	15.07%	15.07%
Minimum 2017-2019 Rate	12.06%	9.05%
Maximum 2017-2019 Rate	18.08%	21.09%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$24,737,248	$28,038,860	$3,301,612	88%	$6,027,492	55%
12/31/2010	26,047,852	28,853,513	2,805,661	90%	5,776,442	49%
12/31/2011	25,322,119	30,409,250	5,087,131	83%	5,991,100	85%
12/31/2012	28,079,743	30,329,042	2,249,299	93%	5,795,860	39%
12/31/2013	30,314,168	30,961,235	647,067	98%	5,612,190	12%
12/31/2014	30,949,852	36,202,532	5,252,680	85%	6,002,205	88%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Jefferson County

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$5,252,680	$647,067
Allocated pooled OPSRP UAL	686,183	396,816
Side account	0	0
Net unfunded pension actuarial accrued liability	5,938,863	1,043,883
Combined valuation payroll	6,002,205	5,612,190
Net pension UAL as a percentage of payroll	99%	19%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$47,709	$77,679

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$359,847	$312,023
Tier 1/Tier 2 valuation payroll	2,108,964	2,154,971
Tier 1/Tier 2 pension normal cost rate	17.06%	14.48%
Tier 1/ Tier 2 Actuarial accrued liability	$36,202,532	$30,961,235
Actuarial asset value	30,949,852	30,314,168
Tier 1/Tier 2 Unfunded actuarial accrued liability	5,252,680	647,067
Tier 1/ Tier 2 Funded status	85%	98%
Combined valuation payroll	$6,002,205	$5,612,190
Tier 1/Tier 2 UAL as a percentage of payroll	88%	12%
Tier 1/Tier 2 UAL rate	1.02%	0.59%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	39	42
Tier 1/Tier 2 dormant members	72	79
Tier 1/Tier 2 retirees and beneficiaries	190	185

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	6,002,205	5,612,190
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$4,547,661	$4,768,157
2. Employer reserves	15,641,102	14,942,600
3. Benefits in force reserve	10,761,089	10,603,411
4. Total market value of assets *(1. + 2. + 3.)*	**$30,949,852**	**$30,314,168**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$30,314,168
2.	Regular employer contributions	312,369
3.	Benefit payments and expense	(1,777,274)
4.	Adjustments [1]	(36,032)
5.	Interest credited	2,136,622
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$30,949,852**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$52,573	$42,745
Tier 1 General Service	108,810	109,432
Tier 2 Police & Fire	67,976	53,604
Tier 2 General Service	130,488	106,242
Total	**$359,847**	**$312,023**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$299,541	$359,847	$60,306

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$1,343,511	$1,096,554
▪ Tier 1 General Service	5,623,480	5,406,504
▪ Tier 2 Police & Fire	1,680,986	1,349,503
▪ Tier 2 General Service	3,080,848	2,656,127
▪ **Total Active Members**	**$11,728,825**	**$10,508,688**
Dormant Members	3,597,461	3,360,222
Retired Members and Beneficiaries	20,876,246	17,092,325
Total Actuarial Accrued Liability	**$36,202,532**	**$30,961,235**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$32,041,148	$36,202,532	$4,161,384

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$36,202,532	$30,961,235
2. Actuarial value of assets	30,949,852	30,314,168
3. Unfunded accrued liability *(1. – 2.)*	5,252,680	647,067
4. Funded percentage *(2. ÷ 1.)*	85%	98%
5. Combined valuation payroll	$6,002,205	$5,612,190
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	88%	12%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$647,067	$46,835	$48,215	$648,447	$48,573
December 31, 2014	N/A	N/A	N/A	$4,604,233	$333,157
Total				**$5,252,680**	**$381,730**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$30,961,235
b. Normal cost at December 31, 2013	312,023
c. Benefit payments during 2014	(1,763,585)
d. Interest at 7.75% to December 31, 2014	2,343,248
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	31,852,921
f. Change in actuarial accrued liability due to assumption, method, and plan changes	4,161,384
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	36,014,305
2. Actuarial accrued liability at December 31, 2014	36,202,532
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(188,227)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	30,314,168
b. Contributions for 2014[1]	312,369
c. Benefit payments and expenses during 2014	(1,777,274)
d. Interest at 7.75% to December 31, 2014	2,292,583
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	31,141,845
5. Actuarial value of assets at December 31, 2014	30,949,852
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(191,993)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($380,220)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$647,067**
2. Expected increase	64,009
3. Liability (gain)/loss	188,227
4. Asset (gain)/loss	191,993
5. Change due to changes in assumptions, methods, and plan provisions	4,161,384
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$5,252,680**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$52,573	$209,901	25.05%	$42,745	$208,764	20.48%
Tier 1 General Service	108,810	632,696	17.20%	109,432	703,008	15.57%
Tier 2 Police & Fire	67,976	338,604	20.08%	53,604	327,247	16.38%
Tier 2 General Service	130,488	927,763	14.06%	106,242	915,952	11.60%
Total	**$359,847**	**$2,108,964**	**17.06%**	**$312,023**	**$2,154,971**	**14.48%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$5,252,680	$647,067
2. Next year's Tier 1/Tier 2 UAL payment	381,730	46,835
3. Combined valuation payroll	6,002,205	5,612,190
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.36%	0.83%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.06%	14.48%
b. Tier 1/Tier 2 UAL rate	6.36%	0.83%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	23.57%	15.46%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	15.07%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	15.07%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.01%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.01%
c. Funded percentage	85%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.01%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	12.06%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	18.08%
7. Advisory July 1, 2017 total pension rate, before adjustment	23.57%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.49%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	6.36%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.87%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	18.08%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.06%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.06%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	18.08%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.06%	14.48%
b. Tier 1/Tier 2 UAL rate	0.87%	0.44%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	18.08%	15.07%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$632,696	$209,901	$842,597
Tier 2	927,763	338,604	1,266,367
Tier 1/Tier 2 valuation payroll	1,560,459	548,505	2,108,964
OPSRP valuation payroll	2,547,793	1,345,448	3,893,241
Combined valuation payroll	**$4,108,252**	**$1,893,953**	**$6,002,205**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	11	19	52	82	13	21	50	84
Police & Fire	4	5	29	38	3	5	24	32
Total	15	24	81	120	16	26	74	116
Active Members with previous service segments with the employer								
General Service	33	30	N/A	63	33	29	N/A	62
Police & Fire	6	15	N/A	21	8	15	N/A	23
Total	39	45	N/A	84	41	44	N/A	85
Dormant Members								
General Service	21	39	12	72	26	41	9	76
Police & Fire	5	7	4	16	5	7	5	17
Total	26	46	16	88	31	48	14	93
Retired Members and Beneficiaries								
General Service	124	22	0	146	122	19	0	141
Police & Fire	41	3	0	44	41	3	0	44
Total	165	25	0	190	163	22	0	185
Grand Total Number of Members	**245**	**140**	**97**	**482**	**251**	**140**	**88**	**479**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

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

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	4	813
40-44	6	357
45-49	14	763
50-54	11	837
55-59	12	366
60-64	10	432
65-69	11	212
70-74	2	114
75+	2	122
Total	72	511

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	3	39
45-49	3	131
50-54	6	1,360
55-59	10	1,095
60-64	40	830
65-69	48	728
70-74	29	503
75-79	23	656
80-84	16	697
85-89	6	444
90-94	4	736
95-99	2	228
100+		
Total	190	709

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Keno Rural Fire Protection District/2646
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

November 2015
Keno Rural Fire Protection District/2646

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

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

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

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

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

Milliman

November 2015
Keno Rural Fire Protection District/2646

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

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

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

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

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

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

Sincerely,

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

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

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Keno Rural Fire Protection District -- #2646

November 2015

CONTENTS

Executive Summary

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

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Keno Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Keno Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	19.56%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(2.24%)	(2.24%)	(2.24%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.33%**	**6.87%**	**11.67%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.83%**	**7.30%**	**12.10%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 95%.

Funded Status as of December 31, 2015	**70% to 130%**	**Under 60% or Over 140%**
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	14.32%	14.32%
Minimum 2017-2019 Rate	11.32%	8.32%
Maximum 2017-2019 Rate	17.32%	20.32%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$536,346	$605,171	$68,825	89%	$128,941	53%
12/31/2010	614,060	632,015	17,955	97%	117,841	15%
12/31/2011	648,686	725,949	77,263	89%	130,385	59%
12/31/2012	751,036	752,159	1,123	100%	105,208	1%
12/31/2013	881,486	829,968	(51,518)	106%	113,276	(45%)
12/31/2014	960,286	1,014,651	54,365	95%	118,700	46%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Keno Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$54,365	($51,518)
Allocated pooled OPSRP UAL	13,570	8,009
Side account	0	0
Net unfunded pension actuarial accrued liability	67,935	(43,509)
Combined valuation payroll	118,700	113,276
Net pension UAL as a percentage of payroll	57%	(38%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$943	$1,568

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$23,216	$18,541
Tier 1/Tier 2 valuation payroll	118,700	113,276
Tier 1/Tier 2 pension normal cost rate	19.56%	16.37%
Tier 1/ Tier 2 Actuarial accrued liability	$1,014,651	$829,968
Actuarial asset value	960,286	881,486
Tier 1/Tier 2 Unfunded actuarial accrued liability	54,365	(51,518)
Tier 1/ Tier 2 Funded status	95%	106%
Combined valuation payroll	$118,700	$113,276
Tier 1/Tier 2 UAL as a percentage of payroll	46%	(45%)
Tier 1/Tier 2 UAL rate	(2.24%)	(2.05%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	3	3

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	118,700	113,276
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$206,325	$193,958
2. Employer reserves	710,167	641,707
3. Benefits in force reserve	43,794	45,821
4. Total market value of assets ***(1. + 2. + 3.)***	**$960,286**	**$881,486**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$881,486
2. Regular employer contributions	20,402
3. Benefit payments and expense	(7,233)
4. Adjustments [1]	1,879
5. Interest credited	63,752
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$960,286**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$23,216	$18,541
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$23,216**	**$18,541**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$19,283	$23,216	$3,933

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$927,985	$752,243
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	1,708	3,863
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$929,693**	**$756,106**
Dormant Members	0	0
Retired Members and Beneficiaries	84,958	73,862
Total Actuarial Accrued Liability	**$1,014,651**	**$829,968**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$879,614	$1,014,651	$135,037

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$1,014,651	$829,968
2. Actuarial value of assets	960,286	881,486
3. Unfunded accrued liability *(1. – 2.)*	54,365	(51,518)
4. Funded percentage *(2. ÷ 1.)*	95%	106%
5. Combined valuation payroll	$118,700	$113,276
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	46%	(45%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($51,518)	($3,729)	($3,839)	($51,628)	($3,867)
December 31, 2014	N/A	N/A	N/A	$105,993	$7,670
Total				**$54,365**	**$3,803**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$829,968
b. Normal cost at December 31, 2013	18,541
c. Benefit payments during 2014	(7,177)
d. Interest at 7.75% to December 31, 2014	64,763
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	906,095
f. Change in actuarial accrued liability due to assumption, method, and plan changes	135,037
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	1,041,132
2. Actuarial accrued liability at December 31, 2014	1,014,651
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	26,481
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	881,486
b. Contributions for 2014[1]	20,402
c. Benefit payments and expenses during 2014	(7,233)
d. Interest at 7.75% to December 31, 2014	68,825
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	963,480
5. Actuarial value of assets at December 31, 2014	960,286
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(3,195)
7. Total actuarial gain/(loss) *(3. + 6.)*	**$23,286**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($51,518)**
2. Expected increase	(5,868)
3. Liability (gain)/loss	(26,481)
4. Asset (gain)/loss	3,195
5. Change due to changes in assumptions, methods, and plan provisions	135,037
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$54,365**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$23,216	$118,700	19.56%	$18,541	$113,276	16.37%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$23,216**	**$118,700**	**19.56%**	**$18,541**	**$113,276**	**16.37%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$54,365	($51,518)
2. Next year's Tier 1/Tier 2 UAL payment	3,803	(3,729)
3. Combined valuation payroll	118,700	113,276
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.20%	(3.29%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.56%	16.37%
b. Tier 1/Tier 2 UAL rate	3.20%	(3.29%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	22.91%	13.23%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	14.32%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.32%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	2.86%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
	c. Funded percentage	95%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5.	Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.32%
6.	Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	17.32%
7.	Advisory July 1, 2017 total pension rate, before adjustment	22.91%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.59%)
9.	Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	3.20%
10.	Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.39%)
11.	Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	17.32%
12.	Tier 1/Tier 2 retiree healthcare rate	0.50%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14.	Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	19.56%
15.	Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	19.56%
16.	Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.32%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.56%	16.37%
b. Tier 1/Tier 2 UAL rate	(2.39%)	(2.20%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	17.32%	14.32%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$118,700	$118,700
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	118,700	118,700
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$118,700**	**$118,700**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	1	4	N/A	5	1	4	N/A	5
Total	1	4	N/A	5	1	4	N/A	5
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	1	1	0	2	1	1	0	2
Total	2	1	0	3	2	1	0	3
Grand Total Number of Members	**4**	**5**	**0**	**9**	**4**	**5**	**0**	**9**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

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

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

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

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	447
60-64	1	1
65-69		
70-74	1	24
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	3	157

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Klamath County Fire District #1/2515
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

Milliman

November 2015
Klamath County Fire District #1/2515

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Klamath County Fire District #1 -- #2515

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Klamath County Fire District #1 to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Klamath County Fire District #1.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Klamath County Fire District #1

	Payroll		
		OPSRP	
	Tier 1/Tier 2	**General Service**	**Police & Fire**
Pension			
Normal cost rate	20.85%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	4.71%	4.71%	4.71%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**26.57%**	**13.82%**	**18.62%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**27.07%**	**14.25%**	**19.05%**

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

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 75%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	21.30%	21.30%
Minimum 2017-2019 Rate	17.04%	12.78%
Maximum 2017-2019 Rate	25.56%	29.82%

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$26,521,815	$33,357,196	$6,835,381	80%	$5,647,736	121%
12/31/2010	28,009,421	33,417,879	5,408,458	84%	5,205,087	104%
12/31/2011	27,401,974	35,883,765	8,481,791	76%	5,209,949	163%
12/31/2012	30,046,017	37,192,655	7,146,638	81%	5,617,966	127%
12/31/2013	32,664,639	37,839,742	5,175,103	86%	4,890,407	106%
12/31/2014	33,469,217	44,744,795	11,275,578	75%	5,000,010	226%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

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

Klamath County Fire District #1

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$11,275,578	$5,175,103
Allocated pooled OPSRP UAL	571,610	345,782
Side account	0	0
Net unfunded pension actuarial accrued liability	11,847,188	5,520,885
Combined valuation payroll	5,000,010	4,890,407
Net pension UAL as a percentage of payroll	237%	113%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$39,743	$67,688

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$517,188	$481,724
Tier 1/Tier 2 valuation payroll	2,480,505	2,805,950
Tier 1/Tier 2 pension normal cost rate	20.85%	17.17%
Tier 1/ Tier 2 Actuarial accrued liability	$44,744,795	$37,839,742
Actuarial asset value	33,469,217	32,664,639
Tier 1/Tier 2 Unfunded actuarial accrued liability	11,275,578	5,175,103
Tier 1/ Tier 2 Funded status	75%	86%
Combined valuation payroll	$5,000,010	$4,890,407
Tier 1/Tier 2 UAL as a percentage of payroll	226%	106%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	4.71%	4.13%
Tier 1/Tier 2 active members [1]	27	30
Tier 1/Tier 2 dormant members	3	3
Tier 1/Tier 2 retirees and beneficiaries	71	72

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

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

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	5,000,010	4,890,407
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

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

Tier 1/Tier 2 Valuation Results

Assets

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

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

	December 31, 2014	December 31, 2013
1. Member reserves	$3,541,981	$3,432,339
2. Employer reserves	14,849,567	13,828,000
3. Benefits in force reserve	15,077,669	15,404,300
4. Total market value of assets *(1. + 2. + 3.)*	**$33,469,217**	**$32,664,639**

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

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$32,664,639
2.	Regular employer contributions	486,579
3.	Benefit payments and expense	(2,490,189)
4.	Adjustments [1]	509,821
5.	Interest credited	2,298,368
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$33,469,217**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

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

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$324,068	$285,654
Tier 1 General Service	0	0
Tier 2 Police & Fire	181,334	185,804
Tier 2 General Service	11,786	10,266
Total	**$517,188**	**$481,724**

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

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$420,851	$517,188	$96,337

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$10,241,338	$9,006,948
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	3,770,680	3,551,542
▪ Tier 2 General Service	180,489	148,498
▪ **Total Active Members**	**$14,192,507**	**$12,706,988**
Dormant Members	1,301,983	301,563
Retired Members and Beneficiaries	29,250,305	24,831,191
Total Actuarial Accrued Liability	**$44,744,795**	**$37,839,742**

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

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$38,489,672	$44,744,795	$6,255,123

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

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

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$44,744,795	$37,839,742
2. Actuarial value of assets	33,469,217	32,664,639
3. Unfunded accrued liability *(1. – 2.)*	11,275,578	5,175,103
4. Funded percentage *(2. ÷ 1.)*	75%	86%
5. Combined valuation payroll	$5,000,010	$4,890,407
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	226%	106%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$5,175,103	$374,573	$385,615	$5,186,145	$388,475
December 31, 2014	N/A	N/A	N/A	$6,089,433	$440,625
Total				**$11,275,578**	**$829,100**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

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

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$37,839,742
b. Normal cost at December 31, 2013	481,724
c. Benefit payments during 2014	(2,471,010)
d. Interest at 7.75% to December 31, 2014	2,855,495
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	38,705,951
f. Change in actuarial accrued liability due to assumption, method, and plan changes	6,255,123
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	44,961,074
2. Actuarial accrued liability at December 31, 2014	44,744,795
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	216,279
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	32,664,639
b. Contributions for 2014[1]	486,579
c. Benefit payments and expenses during 2014	(2,490,189)
d. Interest at 7.75% to December 31, 2014	2,453,870
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	33,114,898
5. Actuarial value of assets at December 31, 2014	33,469,217
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	354,319
7. Total actuarial gain/(loss) *(3. + 6.)*	**$570,598**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$5,175,103**
2. Expected increase	415,950
3. Liability (gain)/loss	(216,279)
4. Asset (gain)/loss	(354,319)
5. Change due to changes in assumptions, methods, and plan provisions	6,255,123
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$11,275,578**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

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

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$324,068	$1,398,974	23.16%	$285,654	$1,516,366	18.84%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	181,334	958,882	18.91%	185,804	1,166,196	15.93%
Tier 2 General Service	11,786	122,649	9.61%	10,266	123,388	8.32%
Total	**$517,188**	**$2,480,505**	**20.85%**	**$481,724**	**$2,805,950**	**17.17%**

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

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

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

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$11,275,578	$5,175,103
2. Next year's Tier 1/Tier 2 UAL payment	829,100	374,573
3. Combined valuation payroll	5,000,010	4,890,407
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	16.58%	7.66%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

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

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.85%	17.17%
b. Tier 1/Tier 2 UAL rate	16.58%	7.66%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	37.58%	24.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

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

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	21.30%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	21.30%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	4.26%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	4.26%
c. Funded percentage	75%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	4.26%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	17.04%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	25.56%
7. Advisory July 1, 2017 total pension rate, before adjustment	37.58%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(12.02%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	16.58%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.56%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	25.56%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	20.85%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	20.85%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	25.56%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

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

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.85%	17.17%
b. Tier 1/Tier 2 UAL rate	4.56%	3.98%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	25.56%	21.30%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$1,398,974	$1,398,974
Tier 2	122,649	958,882	1,081,531
Tier 1/Tier 2 valuation payroll	122,649	2,357,856	2,480,505
OPSRP valuation payroll	113,504	2,406,001	2,519,505
Combined valuation payroll	**$236,153**	**$4,763,857**	**$5,000,010**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	2	3	5	0	2	2	4
Police & Fire	14	11	30	55	15	13	25	53
Total	14	13	33	60	15	15	27	57
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	3	11	N/A	14	3	10	N/A	13
Total	3	11	N/A	14	3	10	N/A	13
Dormant Members								
General Service	0	1	1	2	0	1	1	2
Police & Fire	1	1	0	2	1	1	1	3
Total	1	2	1	4	1	2	2	5
Retired Members and Beneficiaries								
General Service	5	0	0	5	6	0	0	6
Police & Fire	60	6	1	67	61	5	1	67
Total	65	6	1	72	67	5	1	73
Grand Total Number of Members	**83**	**32**	**35**	**150**	**86**	**32**	**30**	**148**

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

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			3							**3**
40-44			3	3	1					**7**
45-49			1	2		2				**5**
50-54				2	1	3	1			**7**
55-59			1	1		1	2			**5**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**8**	**8**	**2**	**6**	**3**	**0**	**0**	**27**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	560
50-54		
55-59		
60-64	2	3,800
65-69		
70-74		
75+		
Total	3	2,720

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	2	77
55-59	20	2,908
60-64	17	3,070
65-69	13	2,837
70-74	6	1,537
75-79	3	1,528
80-84	6	1,186
85-89	2	541
90-94	2	503
95-99		
100+		
Total	71	2,400

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

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

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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November 2015

Knappa Svensen Burnside Rural Fire Protection District/2760
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Knappa Svensen Burnside Rural Fire Protection District/2760

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Knappa Svensen Burnside Rural Fire Protection District -- #2760

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Knappa Svensen Burnside Rural Fire Protection District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Knappa Svensen Burnside Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Knappa Svensen Burnside Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	20.36%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(6.00%)	(6.00%)	(6.00%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.37%**	**3.11%**	**7.91%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**15.87%**	**3.54%**	**8.34%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 87%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	11.36%	11.36%
Minimum 2017-2019 Rate	8.36%	5.36%
Maximum 2017-2019 Rate	14.36%	17.36%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$281,947	$266,881	($15,066)	106%	$71,483	(21%)
12/31/2010	314,770	288,809	(25,961)	109%	72,007	(36%)
12/31/2011	331,085	326,025	(5,060)	102%	78,399	(6%)
12/31/2012	385,794	376,481	(9,313)	102%	83,896	(11%)
12/31/2013	446,356	423,729	(22,627)	105%	87,524	(26%)
12/31/2014	487,092	558,717	71,625	87%	96,567	74%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Knappa Svensen Burnside Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$71,625	($22,627)
Allocated pooled OPSRP UAL	11,040	6,188
Side account	0	0
Net unfunded pension actuarial accrued liability	82,665	(16,439)
Combined valuation payroll	96,567	87,524
Net pension UAL as a percentage of payroll	86%	(19%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$768	$1,211

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$19,661	$15,150
Tier 1/Tier 2 valuation payroll	96,567	87,524
Tier 1/Tier 2 pension normal cost rate	20.36%	17.31%
Tier 1/ Tier 2 Actuarial accrued liability	$558,717	$423,729
Actuarial asset value	487,092	446,356
Tier 1/Tier 2 Unfunded actuarial accrued liability	71,625	(22,627)
Tier 1/ Tier 2 Funded status	87%	105%
Combined valuation payroll	$96,567	$87,524
Tier 1/Tier 2 UAL as a percentage of payroll	74%	(26%)
Tier 1/Tier 2 UAL rate	(6.00%)	(5.95%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	96,567	87,524
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$134,783	$125,550
2. Employer reserves	352,309	320,806
3. Benefits in force reserve	0	0
4. Total market value of assets *(1. + 2. + 3.)*	**$487,092**	**$446,356**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$446,356
2.	Regular employer contributions	7,705
3.	Benefit payments and expense	0
4.	Adjustments [1]	(280)
5.	Interest credited	33,311
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$487,092**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$19,661	$15,150
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$19,661**	**$15,150**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$16,395	$19,661	$3,266

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$558,717	$423,729
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$558,717**	**$423,729**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$558,717**	**$423,729**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$483,174	$558,717	$75,543

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$558,717	$423,729
2. Actuarial value of assets	487,092	446,356
3. Unfunded accrued liability *(1. – 2.)*	71,625	(22,627)
4. Funded percentage *(2. ÷ 1.)*	87%	105%
5. Combined valuation payroll	$96,567	$87,524
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	74%	(26%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($22,627)	($1,638)	($1,686)	($22,675)	($1,699)
December 31, 2014	N/A	N/A	N/A	$94,300	$6,823
Total				**$71,625**	**$5,124**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$423,729
b. Normal cost at December 31, 2013	15,150
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	33,426
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	472,305
f. Change in actuarial accrued liability due to assumption, method, and plan changes	75,543
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	547,848
2. Actuarial accrued liability at December 31, 2014	558,717
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(10,869)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	446,356
b. Contributions for 2014[1]	7,705
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	34,891
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	488,952
5. Actuarial value of assets at December 31, 2014	487,092
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,861)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($12,730)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($22,627)**
2. Expected increase	5,979
3. Liability (gain)/loss	10,869
4. Asset (gain)/loss	1,861
5. Change due to changes in assumptions, methods, and plan provisions	75,543
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$71,625**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$19,661	$96,567	20.36%	$15,150	$87,524	17.31%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$19,661**	**$96,567**	**20.36%**	**$15,150**	**$87,524**	**17.31%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$71,625	($22,627)
2. Next year's Tier 1/Tier 2 UAL payment	5,124	(1,638)
3. Combined valuation payroll	96,567	87,524
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.31%	(1.87%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.36%	17.31%
b. Tier 1/Tier 2 UAL rate	5.31%	(1.87%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	25.82%	15.59%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.36%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.36%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.27%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	87%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.36%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	14.36%
7. Advisory July 1, 2017 total pension rate, before adjustment	25.82%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(11.46%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	5.31%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(6.15%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	14.36%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	20.36%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	20.36%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.36%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	20.36%	17.31%
b. Tier 1/Tier 2 UAL rate	(6.15%)	(6.10%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	14.36%	11.36%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$96,567	$96,567
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	96,567	96,567
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$96,567**	**$96,567**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59					1					1
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	1	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

LaGrande Rural Fire Protection District/2879
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
LaGrande Rural Fire Protection District/2879

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

LaGrande Rural Fire Protection District -- #2879

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for LaGrande Rural Fire Protection District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to LaGrande Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for LaGrande Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	**General Service**	**Police & Fire**
Pension			
Normal cost rate	17.01%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	0.15%	0.15%	0.15%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.17%**	**9.26%**	**14.06%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.67%**	**9.69%**	**14.49%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 100%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	N/A	N/A
Minimum 2017-2019 Rate	N/A	N/A
Maximum 2017-2019 Rate	N/A	N/A

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$0	$0	$0	0%	$0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	0	0%
12/31/2012	0	0	0	0%	0	0%
12/31/2013	0	0	0	0%	0	0%
12/31/2014	(2)	0	2	0%	75,446	0%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

LaGrande Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$2	$0
Allocated pooled OPSRP UAL	8,625	0
Side account	0	0
Net unfunded pension actuarial accrued liability	8,627	0
Combined valuation payroll	75,446	0
Net pension UAL as a percentage of payroll	11%	0%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$600	$0

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	17.01%	0.00%
Tier 1/ Tier 2 Actuarial accrued liability	$0	$0
Actuarial asset value	(2)	0
Tier 1/Tier 2 Unfunded actuarial accrued liability	2	0
Tier 1/ Tier 2 Funded status	0%	0%
Combined valuation payroll	$75,446	$0
Tier 1/Tier 2 UAL as a percentage of payroll	0%	0%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	0.15%	0.00%
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	75,446	0
3. Amortization factor	10.118	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$0	$0
2. Employer reserves	(2)	0
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**($2)**	**$0**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$0
2. Regular employer contributions	83
3. Benefit payments and expense	0
4. Adjustments [1]	(91)
5. Interest credited	6
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**($2)**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$0**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$0	$0
2. Actuarial value of assets	(2)	0
3. Unfunded accrued liability *(1. – 2.)*	2	0
4. Funded percentage *(2. ÷ 1.)*	100%	0%
5. Combined valuation payroll	$75,446	$0
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	0%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2014	N/A	N/A	N/A	$2	$0
Total				**$2**	**$0**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$0
b. Normal cost at December 31, 2013	0
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	0
2. Actuarial accrued liability at December 31, 2014	0
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	0
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	0
b. Contributions for 2014[1]	83
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	3
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	86
5. Actuarial value of assets at December 31, 2014	(2)
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(88)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($88)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$0**
2. Expected increase	(86)
3. Liability (gain)/loss	0
4. Asset (gain)/loss	88
5. Change due to changes in assumptions, methods, and plan provisions	0
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$2**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**17.01%**	**$0**	**$0**	**0.00%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$2	$0
2. Next year's Tier 1/Tier 2 UAL payment	0	0
3. Combined valuation payroll	75,446	0
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.00%	0.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.01%	14.24%
b. Tier 1/Tier 2 UAL rate	0.00%	0.00%
c. Multnomah Fire District #10 rate	0.15%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.16%	14.37%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	17.16%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	17.16%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. Advisory July 1, 2017 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	N/A
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.01%	14.24%
b. Tier 1/Tier 2 UAL rate	0.00%	0.00%
c. Multnomah Fire District #10 rate	0.15%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	17.16%	14.37%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	0	75,446	75,446
Combined valuation payroll	**$0**	**$75,446**	**$75,446**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	1	1	0	0	0	0
Total	0	0	1	1	0	0	0	0
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Lake Chinook Fire and Rescue District/2881
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Lake Chinook Fire and Rescue District/2881

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Lake Chinook Fire and Rescue District -- #2881

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Lake Chinook Fire and Rescue District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lake Chinook Fire and Rescue District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Lake Chinook Fire and Rescue District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.01%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	0.15%	0.15%	0.15%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.17%**	**9.26%**	**14.06%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.67%**	**9.69%**	**14.49%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 100%.

Funded Status as of December 31, 2015	**70% to 130%**	**Under 60% or Over 140%**
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	N/A	N/A
Minimum 2017-2019 Rate	N/A	N/A
Maximum 2017-2019 Rate	N/A	N/A

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$0	$0	$0	0%	$0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	0	0%
12/31/2012	0	0	0	0%	0	0%
12/31/2013	0	0	0	0%	0	0%
12/31/2014	(13)	0	13	0%	35,652	0%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lake Chinook Fire and Rescue District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$13	$0
Allocated pooled OPSRP UAL	4,076	0
Side account	0	0
Net unfunded pension actuarial accrued liability	4,089	0
Combined valuation payroll	35,652	0
Net pension UAL as a percentage of payroll	11%	0%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$283	$0

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	17.01%	0.00%
Tier 1/ Tier 2 Actuarial accrued liability	$0	$0
Actuarial asset value	(13)	0
Tier 1/Tier 2 Unfunded actuarial accrued liability	13	0
Tier 1/ Tier 2 Funded status	0%	0%
Combined valuation payroll	$35,652	$0
Tier 1/Tier 2 UAL as a percentage of payroll	0%	0%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	0.15%	0.00%
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	35,652	0
3. Amortization factor	10.118	0.000
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$0	$0
2. Employer reserves	(13)	0
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**($13)**	**$0**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$0
2.	Regular employer contributions	21
3.	Benefit payments and expense	0
4.	Adjustments [1]	(36)
5.	Interest credited	2
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**($13)**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$0**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$0	$0
2. Actuarial value of assets	(13)	0
3. Unfunded accrued liability *(1. – 2.)*	13	0
4. Funded percentage *(2. ÷ 1.)*	100%	0%
5. Combined valuation payroll	$35,652	$0
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	0%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2014	N/A	N/A	N/A	$13	$1
Total				**$13**	**$1**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$0
b. Normal cost at December 31, 2013	0
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	0
2. Actuarial accrued liability at December 31, 2014	0
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	0
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	0
b. Contributions for 2014[1]	21
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	1
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	22
5. Actuarial value of assets at December 31, 2014	(13)
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(35)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($35)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$0**
2. Expected increase	(22)
3. Liability (gain)/loss	0
4. Asset (gain)/loss	35
5. Change due to changes in assumptions, methods, and plan provisions	0
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$13**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**17.01%**	**$0**	**$0**	**0.00%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$13	$0
2. Next year's Tier 1/Tier 2 UAL payment	1	0
3. Combined valuation payroll	35,652	0
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.00%	0.00%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.01%	14.24%
b. Tier 1/Tier 2 UAL rate	0.00%	0.00%
c. Multnomah Fire District #10 rate	0.15%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.16%	14.37%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	17.16%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	17.16%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	N/A
b. Preliminary size of rate collar *(maximum of 3% or a.)*	N/A
c. Funded percentage	N/A
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	N/A
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	N/A
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	N/A
7. Advisory July 1, 2017 total pension rate, before adjustment	N/A
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	N/A
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	N/A
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	N/A
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	N/A
12. Tier 1/Tier 2 retiree healthcare rate	N/A
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	N/A
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	N/A
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	N/A
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	N/A

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.01%	14.24%
b. Tier 1/Tier 2 UAL rate	0.00%	0.00%
c. Multnomah Fire District #10 rate	0.15%	0.13%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	17.16%	14.37%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	0	35,652	35,652
Combined valuation payroll	**$0**	**$35,652**	**$35,652**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	1	1	0	0	0	0
Total	0	0	1	1	0	0	0	0
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Lakeside Water District/2644
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Lakeside Water District/2644

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Lakeside Water District -- #2644

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Lakeside Water District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lakeside Water District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Lakeside Water District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.96%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	3.25%	3.25%	3.25%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.22%**	**12.36%**	**17.16%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**16.72%**	**12.79%**	**17.59%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 83%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	12.21%	12.21%
Minimum 2017-2019 Rate	9.21%	6.21%
Maximum 2017-2019 Rate	15.21%	18.21%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$460,495	$583,881	$123,386	79%	$88,065	140%
12/31/2010	486,366	620,803	134,437	78%	113,608	118%
12/31/2011	476,386	632,094	155,708	75%	148,317	105%
12/31/2012	489,340	572,638	83,298	85%	150,540	55%
12/31/2013	559,083	602,151	43,068	93%	153,024	28%
12/31/2014	583,390	706,891	123,501	83%	161,166	77%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lakeside Water District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$123,501	$43,068
Allocated pooled OPSRP UAL	18,425	10,820
Side account	0	0
Net unfunded pension actuarial accrued liability	141,926	53,888
Combined valuation payroll	161,166	153,024
Net pension UAL as a percentage of payroll	88%	35%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,281	$2,118

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$9,099	$7,370
Tier 1/Tier 2 valuation payroll	76,067	73,533
Tier 1/Tier 2 pension normal cost rate	11.96%	10.02%
Tier 1/ Tier 2 Actuarial accrued liability	$706,891	$602,151
Actuarial asset value	583,390	559,083
Tier 1/Tier 2 Unfunded actuarial accrued liability	123,501	43,068
Tier 1/ Tier 2 Funded status	83%	93%
Combined valuation payroll	$161,166	$153,024
Tier 1/Tier 2 UAL as a percentage of payroll	77%	28%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	3.25%	2.19%
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	3	3
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	161,166	153,024
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$63,027	$58,808
2. Employer reserves	313,546	278,453
3. Benefits in force reserve	206,817	221,822
4. Total market value of assets *(1. + 2. + 3.)*	**$583,390**	**$559,083**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$559,083
2.	Regular employer contributions	13,986
3.	Benefit payments and expense	(34,157)
4.	Adjustments [1]	5,668
5.	Interest credited	38,811
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$583,390**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	9,099	7,370
Total	**$9,099**	**$7,370**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$7,641	$9,099	$1,458

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	200,910	154,535
▪ **Total Active Members**	**$200,910**	**$154,535**
Dormant Members	104,762	90,047
Retired Members and Beneficiaries	401,219	357,569
Total Actuarial Accrued Liability	**$706,891**	**$602,151**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$629,730	$706,891	$77,161

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$706,891	$602,151
2. Actuarial value of assets	583,390	559,083
3. Unfunded accrued liability *(1. – 2.)*	123,501	43,068
4. Funded percentage *(2. ÷ 1.)*	83%	93%
5. Combined valuation payroll	$161,166	$153,024
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	77%	28%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$43,068	$3,117	$3,209	$43,160	$3,233
December 31, 2014	N/A	N/A	N/A	$80,341	$5,813
Total				**$123,501**	**$9,046**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$602,151
b. Normal cost at December 31, 2013	7,370
c. Benefit payments during 2014	(33,894)
d. Interest at 7.75% to December 31, 2014	45,639
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	621,266
f. Change in actuarial accrued liability due to assumption, method, and plan changes	77,161
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	698,427
2. Actuarial accrued liability at December 31, 2014	706,891
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(8,464)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	559,083
b. Contributions for 2014[1]	13,986
c. Benefit payments and expenses during 2014	(34,157)
d. Interest at 7.75% to December 31, 2014	42,547
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	581,458
5. Actuarial value of assets at December 31, 2014	583,390
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,931
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($6,533)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$43,068**
2. Expected increase	(3,261)
3. Liability (gain)/loss	8,464
4. Asset (gain)/loss	(1,931)
5. Change due to changes in assumptions, methods, and plan provisions	77,161
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$123,501**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	9,099	76,067	11.96%	7,370	73,533	10.02%
Total	**$9,099**	**$76,067**	**11.96%**	**$7,370**	**$73,533**	**10.02%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$123,501	$43,068
2. Next year's Tier 1/Tier 2 UAL payment	9,046	3,117
3. Combined valuation payroll	161,166	153,024
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.61%	2.04%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.96%	10.02%
b. Tier 1/Tier 2 UAL rate	5.61%	2.04%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.72%	12.21%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.21%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.21%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.44%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	83%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.21%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	15.21%
7. Advisory July 1, 2017 total pension rate, before adjustment	17.72%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.51%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	5.61%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.10%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	15.21%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.96%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.96%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.21%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.96%	10.02%
b. Tier 1/Tier 2 UAL rate	3.10%	2.04%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	15.21%	12.21%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	76,067	0	76,067
Tier 1/Tier 2 valuation payroll	76,067	0	76,067
OPSRP valuation payroll	85,099	0	85,099
Combined valuation payroll	**$161,166**	**$0**	**$161,166**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	2	3	0	1	2	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	2	3	0	1	2	3
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	0	1	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	0	1	N/A	1
Dormant Members								
General Service	0	3	0	3	0	3	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	3	0	3
Retired Members and Beneficiaries								
General Service	5	0	0	5	5	0	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	5	0	0	5	5	0	0	5
Grand Total Number of Members	**5**	**5**	**2**	**12**	**5**	**5**	**2**	**12**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54			1							**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	1,270
55-59		
60-64	2	4
65-69		
70-74		
75+		
Total	3	426

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69	2	426
70-74	2	316
75-79		
80-84	1	1,233
85-89		
90-94		
95-99		
100+		
Total	5	543

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Lane County/2008
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

November 2015
Lane County/2008

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Lane County/2008

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Lane County -- #2008

November 2015

Secondary Employers

2047 Lane County Fair Board

CONTENTS

Executive Summary

Milliman has prepared this report for Lane County to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lane County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Lane County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.50%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	0.47%	0.47%	0.47%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.98%**	**9.58%**	**14.38%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.48%**	**10.01%**	**14.81%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 82%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	13.97%	13.97%
Minimum 2017-2019 Rate	10.97%	7.97%
Maximum 2017-2019 Rate	16.97%	19.97%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$500,408,457	$583,156,954	$82,748,497	86%	$76,335,867	108%
12/31/2010	530,061,782	608,521,838	78,460,056	87%	82,587,626	95%
12/31/2011	511,461,459	623,549,175	112,087,716	82%	81,017,355	138%
12/31/2012	550,497,247	610,507,495	60,010,248	90%	75,072,561	80%
12/31/2013	597,410,846	627,518,523	30,107,676	95%	73,750,639	41%
12/31/2014	605,171,349	734,035,783	128,864,434	82%	77,932,450	165%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lane County

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$128,864,434	$30,107,676
Allocated pooled OPSRP UAL	8,909,376	5,214,619
Side account	0	0
Net unfunded pension actuarial accrued liability	137,773,810	35,322,295
Combined valuation payroll	77,932,450	73,750,639
Net pension UAL as a percentage of payroll	177%	48%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$619,453	$1,020,788

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$7,334,226	$6,295,854
Tier 1/Tier 2 valuation payroll	44,446,745	45,464,174
Tier 1/Tier 2 pension normal cost rate	16.50%	13.85%
Tier 1/ Tier 2 Actuarial accrued liability	$734,035,783	$627,518,523
Actuarial asset value	605,171,349	597,410,847
Tier 1/Tier 2 Unfunded actuarial accrued liability	128,864,434	30,107,676
Tier 1/ Tier 2 Funded status	82%	95%
Combined valuation payroll	$77,932,450	$73,750,639
Tier 1/Tier 2 UAL as a percentage of payroll	165%	41%
Tier 1/Tier 2 UAL rate	0.47%	0.12%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	623	660
Tier 1/Tier 2 dormant members	338	351
Tier 1/Tier 2 retirees and beneficiaries	1,982	1,935

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	77,932,450	73,750,639
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$62,172,018	$62,724,452
2. Employer reserves	279,001,308	264,130,120
3. Benefits in force reserve	263,998,023	270,556,274
4. Total market value of assets ***(1. + 2. + 3.)***	**$605,171,349**	**$597,410,847**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$597,410,847
2. Regular employer contributions	5,283,065
3. Benefit payments and expense	(43,601,238)
4. Adjustments [1]	4,676,039
5. Interest credited	41,402,636
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$605,171,349**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$960,407	$816,851
Tier 1 General Service	2,781,502	2,468,037
Tier 2 Police & Fire	1,464,793	1,151,601
Tier 2 General Service	2,127,524	1,859,365
Total	**$7,334,226**	**$6,295,854**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$6,138,726	$7,334,226	$1,195,500

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$30,214,415	$24,865,716
▪ Tier 1 General Service	81,707,222	72,589,432
▪ Tier 2 Police & Fire	26,682,069	20,613,996
▪ Tier 2 General Service	43,405,756	36,676,284
▪ **Total Active Members**	**$182,009,462**	**$154,745,428**
Dormant Members	39,876,699	36,645,888
Retired Members and Beneficiaries	512,149,622	436,127,207
Total Actuarial Accrued Liability	**$734,035,783**	**$627,518,523**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$642,980,221	$734,035,783	$91,055,562

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$734,035,783	$627,518,523
2. Actuarial value of assets	605,171,349	597,410,847
3. Unfunded accrued liability *(1. – 2.)*	128,864,434	30,107,676
4. Funded percentage *(2. ÷ 1.)*	82%	95%
5. Combined valuation payroll	$77,932,450	$73,750,639
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	165%	41%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$30,107,676	$2,179,189	$2,243,431	$30,171,918	$2,260,069
December 31, 2014	N/A	N/A	N/A	$98,692,516	$7,141,282
Total				**$128,864,434**	**$9,401,351**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$627,518,523
b. Normal cost at December 31, 2013	6,295,854
c. Benefit payments during 2014	(43,265,423)
d. Interest at 7.75% to December 31, 2014	47,200,115
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	637,749,069
f. Change in actuarial accrued liability due to assumption, method, and plan changes	91,055,562
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	728,804,631
2. Actuarial accrued liability at December 31, 2014	734,035,783
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(5,231,152)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	597,410,847
b. Contributions for 2014[1]	5,283,065
c. Benefit payments and expenses during 2014	(43,601,238)
d. Interest at 7.75% to December 31, 2014	44,814,511
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	603,907,185
5. Actuarial value of assets at December 31, 2014	605,171,349
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	1,264,164
7. Total actuarial gain/(loss) *(3. + 6.)*	**($3,966,988)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$30,107,676**
2. Expected increase	3,734,208
3. Liability (gain)/loss	5,231,152
4. Asset (gain)/loss	(1,264,164)
5. Change due to changes in assumptions, methods, and plan provisions	91,055,562
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$128,864,434**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$960,407	$4,483,946	21.42%	$816,851	$4,680,017	17.45%
Tier 1 General Service	2,781,502	14,993,014	18.55%	2,468,037	15,628,447	15.79%
Tier 2 Police & Fire	1,464,793	8,127,544	18.02%	1,151,601	7,711,191	14.93%
Tier 2 General Service	2,127,524	16,842,241	12.63%	1,859,365	17,444,519	10.66%
Total	**$7,334,226**	**$44,446,745**	**16.50%**	**$6,295,854**	**$45,464,174**	**13.85%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$128,864,434	$30,107,676
2. Next year's Tier 1/Tier 2 UAL payment	9,401,351	2,179,189
3. Combined valuation payroll	77,932,450	73,750,639
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	12.06%	2.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.50%	13.85%
b. Tier 1/Tier 2 UAL rate	12.06%	2.95%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	28.71%	16.95%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1.	Current net Tier 1/Tier 2 pension contribution rate	13.97%
2.	Employer contribution rate attributable to side accounts	0.00%
3.	Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.97%
4.	Size of rate collar	
	a. 20% of current employer contribution rate *(20% x 3.)*	2.79%
	b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
	c. Funded percentage	82%
	d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5.	Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.97%
6.	Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	16.97%
7.	Advisory July 1, 2017 total pension rate, before adjustment	28.71%
8.	Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(11.74%)
9.	Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	12.06%
10.	Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.32%
11.	Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	16.97%
12.	Tier 1/Tier 2 retiree healthcare rate	0.50%
13.	Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14.	Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.50%
15.	Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.50%
16.	Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.97%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.50%	13.85%
b. Tier 1/Tier 2 UAL rate	0.32%	(0.03%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	16.97%	13.97%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$14,993,014	$4,483,946	$19,476,960
Tier 2	16,842,241	8,127,544	24,969,785
Tier 1/Tier 2 valuation payroll	31,835,255	12,611,490	44,446,745
OPSRP valuation payroll	30,020,511	3,465,194	33,485,705
Combined valuation payroll	**$61,855,766**	**$16,076,684**	**$77,932,450**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	208	275	554	1,037	228	287	507	1,022
Police & Fire	46	94	57	197	49	96	34	179
Total	254	369	611	1,234	277	383	541	1,201
Active Members with previous service segments with the employer								
General Service	151	139	N/A	290	157	138	N/A	295
Police & Fire	13	33	N/A	46	14	32	N/A	46
Total	164	172	N/A	336	171	170	N/A	341
Dormant Members								
General Service	166	144	66	376	175	145	50	370
Police & Fire	17	11	7	35	17	14	6	37
Total	183	155	73	411	192	159	56	407
Retired Members and Beneficiaries								
General Service	1,602	99	19	1,720	1,586	78	13	1,677
Police & Fire	264	17	2	283	258	13	2	273
Total	1,866	116	21	2,003	1,844	91	15	1,950
Grand Total Number of Members	**2,467**	**812**	**705**	**3,984**	**2,484**	**803**	**612**	**3,899**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34			3							**3**
35-39		2	30	7						**39**
40-44		1	49	36	5					**91**
45-49		1	34	32	15	9				**91**
50-54		1	34	47	32	31	3			**148**
55-59		1	36	43	28	30	7	2		**147**
60-64	1		13	31	13	16	3	2		**79**
65-69	1		6	12		2	1			**22**
70-74			3							**3**
75+										
Total	**2**	**6**	**208**	**208**	**93**	**88**	**14**	**4**	**0**	**623**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	2	505
35-39	7	537
40-44	33	781
45-49	58	1,337
50-54	52	1,192
55-59	65	1,040
60-64	57	1,233
65-69	43	906
70-74	12	523
75+	9	782
Total	338	1,066

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	15	981
45-49	13	1,893
50-54	28	2,224
55-59	107	1,974
60-64	424	1,806
65-69	566	1,830
70-74	340	1,789
75-79	208	1,634
80-84	146	1,212
85-89	77	1,036
90-94	45	981
95-99	13	300
100+		
Total	1,982	1,699

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.
- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.
- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.
- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.
- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

League of Oregon Cities/2521
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
League of Oregon Cities/2521

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

League of Oregon Cities -- #2521

November 2015

Secondary Employers

2693	City/County Insurance Services
2738	Employes Benefit Services Trust

CONTENTS

Executive Summary

Milliman has prepared this report for League of Oregon Cities to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to League of Oregon Cities.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for League of Oregon Cities

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.32%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	4.27%	4.27%	4.27%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.60%**	**13.38%**	**18.18%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.10%**	**13.81%**	**18.61%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 73%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	13.59%	13.59%
Minimum 2017-2019 Rate	10.59%	7.59%
Maximum 2017-2019 Rate	16.59%	19.59%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$11,310,015	$14,190,669	$2,880,654	80%	$5,344,096	54%
12/31/2010	12,001,208	14,979,241	2,978,033	80%	5,910,498	50%
12/31/2011	11,873,512	15,628,011	3,754,499	76%	6,154,733	61%
12/31/2012	12,998,627	16,022,753	3,024,126	81%	6,322,166	48%
12/31/2013	14,118,834	16,767,448	2,648,614	84%	6,364,078	42%
12/31/2014	14,507,273	19,985,347	5,478,074	73%	6,677,111	82%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

League of Oregon Cities

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$5,478,074	$2,648,614
Allocated pooled OPSRP UAL	763,339	449,979
Side account	0	0
Net unfunded pension actuarial accrued liability	6,241,413	3,098,593
Combined valuation payroll	6,677,111	6,364,078
Net pension UAL as a percentage of payroll	93%	49%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$53,074	$88,086

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$362,870	$288,443
Tier 1/Tier 2 valuation payroll	2,944,619	2,713,543
Tier 1/Tier 2 pension normal cost rate	12.32%	10.63%
Tier 1/ Tier 2 Actuarial accrued liability	$19,985,347	$16,767,448
Actuarial asset value	14,507,273	14,118,834
Tier 1/Tier 2 Unfunded actuarial accrued liability	5,478,074	2,648,614
Tier 1/ Tier 2 Funded status	73%	84%
Combined valuation payroll	$6,677,111	$6,364,078
Tier 1/Tier 2 UAL as a percentage of payroll	82%	42%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	4.27%	2.96%
Tier 1/Tier 2 active members [1]	28	27
Tier 1/Tier 2 dormant members	12	14
Tier 1/Tier 2 retirees and beneficiaries	42	41

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	6,677,111	6,364,078
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$1,635,343	$1,617,981
2. Employer reserves	6,468,064	5,993,306
3. Benefits in force reserve	6,403,866	6,507,547
4. Total market value of assets ***(1. + 2. + 3.)***	**$14,507,273**	**$14,118,834**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$14,118,834
2.	Regular employer contributions	322,718
3.	Benefit payments and expense	(1,057,646)
4.	Adjustments [1]	131,465
5.	Interest credited	991,901
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$14,507,273**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	147,660	126,139
Tier 2 Police & Fire	0	0
Tier 2 General Service	215,210	162,304
Total	**$362,870**	**$288,443**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$304,884	$362,870	$57,986

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	3,128,671	2,604,990
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	3,143,186	2,564,089
▪ **Total Active Members**	**$6,271,857**	**$5,169,079**
Dormant Members	1,290,150	1,108,431
Retired Members and Beneficiaries	12,423,340	10,489,938
Total Actuarial Accrued Liability	**$19,985,347**	**$16,767,448**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$17,466,798	$19,985,347	$2,518,549

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$19,985,347	$16,767,448
2. Actuarial value of assets	14,507,273	14,118,834
3. Unfunded accrued liability *(1. – 2.)*	5,478,074	2,648,614
4. Funded percentage *(2. ÷ 1.)*	73%	84%
5. Combined valuation payroll	$6,677,111	$6,364,078
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	82%	42%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$2,648,614	$191,706	$197,358	$2,654,266	$198,821
December 31, 2014	N/A	N/A	N/A	$2,823,808	$204,328
Total				**$5,478,074**	**$403,149**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$16,767,448
b. Normal cost at December 31, 2013	288,443
c. Benefit payments during 2014	(1,049,500)
d. Interest at 7.75% to December 31, 2014	1,269,986
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	17,276,377
f. Change in actuarial accrued liability due to assumption, method, and plan changes	2,518,549
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	19,794,926
2. Actuarial accrued liability at December 31, 2014	19,985,347
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(190,421)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	14,118,834
b. Contributions for 2014[1]	322,718
c. Benefit payments and expenses during 2014	(1,057,646)
d. Interest at 7.75% to December 31, 2014	1,065,731
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	14,449,637
5. Actuarial value of assets at December 31, 2014	14,507,273
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	57,635
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($132,786)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$2,648,614**
2. Expected increase	178,125
3. Liability (gain)/loss	190,421
4. Asset (gain)/loss	(57,635)
5. Change due to changes in assumptions, methods, and plan provisions	2,518,549
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$5,478,074**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	147,660	1,126,898	13.10%	126,139	1,123,456	11.23%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	215,210	1,817,721	11.84%	162,304	1,590,087	10.21%
Total	**$362,870**	**$2,944,619**	**12.32%**	**$288,443**	**$2,713,543**	**10.63%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$5,478,074	$2,648,614
2. Next year's Tier 1/Tier 2 UAL payment	403,149	191,706
3. Combined valuation payroll	6,677,111	6,364,078
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.04%	3.01%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.32%	10.63%
b. Tier 1/Tier 2 UAL rate	6.04%	3.01%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	18.51%	13.79%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.59%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.59%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.72%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	73%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.59%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	16.59%
7. Advisory July 1, 2017 total pension rate, before adjustment	18.51%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.92%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	6.04%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	4.12%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	16.59%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.32%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.32%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.59%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.32%	10.63%
b. Tier 1/Tier 2 UAL rate	4.12%	2.81%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	16.59%	13.59%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,126,898	$0	$1,126,898
Tier 2	1,817,721	0	1,817,721
Tier 1/Tier 2 valuation payroll	2,944,619	0	2,944,619
OPSRP valuation payroll	3,687,840	0	3,687,840
Combined valuation payroll	**$6,632,459**	**$0**	**$6,632,459**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	10	18	46	74	11	16	46	73
Police & Fire	0	0	0	0	0	0	0	0
Total	10	18	46	74	11	16	46	73
Active Members with previous service segments with the employer								
General Service	5	8	N/A	13	4	8	N/A	12
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	5	8	N/A	13	4	8	N/A	12
Dormant Members								
General Service	7	5	6	18	7	7	5	19
Police & Fire	0	0	0	0	0	0	0	0
Total	7	5	6	18	7	7	5	19
Retired Members and Beneficiaries								
General Service	39	3	4	46	40	1	4	45
Police & Fire	0	0	0	0	0	0	0	0
Total	39	3	4	46	40	1	4	45
Grand Total Number of Members	**61**	**34**	**56**	**151**	**62**	**32**	**55**	**149**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34		1								1
35-39		1	3							4
40-44			1	1						2
45-49			3	2	1					6
50-54			1	2	1	1				5
55-59			2	1	1	1	1			6
60-64				3						3
65-69				1						1
70-74										
75+										
Total	**0**	**2**	**10**	**10**	**3**	**2**	**1**	**0**	**0**	**28**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	1,313
40-44	2	1,121
45-49	3	979
50-54	1	146
55-59	2	1,493
60-64		
65-69	3	1,099
70-74		
75+		
Total	12	1,077

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	2,219
60-64	5	1,199
65-69	17	2,309
70-74	11	1,942
75-79	4	751
80-84	3	2,849
85-89		
90-94		
95-99		
100+		
Total	42	1,967

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Linn County/2014
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Linn County/2014

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Linn County -- #2014

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Linn County to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Linn County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Linn County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.39%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	3.99%	3.99%	3.99%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**22.39%**	**13.10%**	**17.90%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**22.89%**	**13.53%**	**18.33%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 77%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	17.82%	17.82%
Minimum 2017-2019 Rate	14.26%	10.70%
Maximum 2017-2019 Rate	21.38%	24.94%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$135,458,576	$173,289,627	$37,831,051	78%	$32,768,668	115%
12/31/2010	145,618,230	182,831,652	37,213,422	80%	34,453,366	108%
12/31/2011	144,346,411	184,066,697	39,720,286	78%	34,012,953	117%
12/31/2012	159,362,121	189,449,664	30,087,543	84%	34,115,995	88%
12/31/2013	175,224,089	199,169,091	23,945,002	88%	32,600,717	73%
12/31/2014	180,267,989	234,410,147	54,142,158	77%	33,973,436	159%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Linn County

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$54,142,158	$23,945,002
Allocated pooled OPSRP UAL	3,883,903	2,305,069
Side account	0	0
Net unfunded pension actuarial accrued liability	58,026,061	26,250,071
Combined valuation payroll	33,973,436	32,600,717
Net pension UAL as a percentage of payroll	171%	81%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$270,041	$451,229

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$3,550,599	$3,077,044
Tier 1/Tier 2 valuation payroll	20,416,191	21,055,562
Tier 1/Tier 2 pension normal cost rate	17.39%	14.61%
Tier 1/ Tier 2 Actuarial accrued liability	$234,410,147	$199,169,091
Actuarial asset value	180,267,989	175,224,089
Tier 1/Tier 2 Unfunded actuarial accrued liability	54,142,158	23,945,002
Tier 1/ Tier 2 Funded status	77%	88%
Combined valuation payroll	$33,973,436	$32,600,717
Tier 1/Tier 2 UAL as a percentage of payroll	159%	73%
Tier 1/Tier 2 UAL rate	3.99%	3.21%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	314	327
Tier 1/Tier 2 dormant members	162	170
Tier 1/Tier 2 retirees and beneficiaries	651	628

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	33,973,436	32,600,717
3. Amortization factor	10.118	10.703
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$28,294,612	$28,499,990
2. Employer reserves	85,514,864	79,734,116
3. Benefits in force reserve	66,458,513	66,989,984
4. Total market value of assets ***(1. + 2. + 3.)***	**$180,267,989**	**$175,224,089**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$175,224,089
2.	Regular employer contributions	3,924,953
3.	Benefit payments and expense	(10,976,118)
4.	Adjustments [1]	(237,341)
5.	Interest credited	12,332,406
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$180,267,989**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$677,995	$548,266
Tier 1 General Service	1,331,432	1,197,572
Tier 2 Police & Fire	654,388	548,915
Tier 2 General Service	886,784	782,291
Total	**$3,550,599**	**$3,077,044**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$2,964,176	$3,550,599	$586,423

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$21,546,289	$17,354,079
▪ Tier 1 General Service	39,869,548	35,416,723
▪ Tier 2 Police & Fire	11,615,131	9,387,226
▪ Tier 2 General Service	18,571,907	15,929,271
▪ **Total Active Members**	**$91,602,875**	**$78,087,299**
Dormant Members	13,879,403	13,096,293
Retired Members and Beneficiaries	128,927,869	107,985,499
Total Actuarial Accrued Liability	**$234,410,147**	**$199,169,091**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$206,245,383	$234,410,147	$28,164,764

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$234,410,147	$199,169,091
2. Actuarial value of assets	180,267,989	175,224,089
3. Unfunded accrued liability *(1. – 2.)*	54,142,158	23,945,002
4. Funded percentage *(2. ÷ 1.)*	77%	88%
5. Combined valuation payroll	$33,973,436	$32,600,717
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	159%	73%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$23,945,002	$1,733,136	$1,784,228	$23,996,094	$1,797,460
December 31, 2014	N/A	N/A	N/A	$30,146,064	$2,181,336
Total				**$54,142,158**	**$3,978,796**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$199,169,091
b. Normal cost at December 31, 2013	3,077,044
c. Benefit payments during 2014	(10,891,580)
d. Interest at 7.75% to December 31, 2014	15,132,791
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	206,487,346
f. Change in actuarial accrued liability due to assumption, method, and plan changes	28,164,764
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	234,652,110
2. Actuarial accrued liability at December 31, 2014	234,410,147
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	241,963
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	175,224,089
b. Contributions for 2014[1]	3,924,953
c. Benefit payments and expenses during 2014	(10,976,118)
d. Interest at 7.75% to December 31, 2014	13,306,634
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	181,479,559
5. Actuarial value of assets at December 31, 2014	180,267,989
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,211,569)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($969,606)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$23,945,002**
2. Expected increase	1,062,786
3. Liability (gain)/loss	(241,963)
4. Asset (gain)/loss	1,211,569
5. Change due to changes in assumptions, methods, and plan provisions	28,164,764
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$54,142,158**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$677,995	$3,011,589	22.51%	$548,266	$3,015,366	18.18%
Tier 1 General Service	1,331,432	7,218,973	18.44%	1,197,572	7,579,918	15.80%
Tier 2 Police & Fire	654,388	3,385,725	19.33%	548,915	3,441,789	15.95%
Tier 2 General Service	886,784	6,799,904	13.04%	782,291	7,018,489	11.15%
Total	**$3,550,599**	**$20,416,191**	**17.39%**	**$3,077,044**	**$21,055,562**	**14.61%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$54,142,158	$23,945,002
2. Next year's Tier 1/Tier 2 UAL payment	3,978,796	1,733,136
3. Combined valuation payroll	33,973,436	32,600,717
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	11.71%	5.32%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.39%	14.61%
b. Tier 1/Tier 2 UAL rate	11.71%	5.32%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	29.25%	20.08%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	17.82%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	17.82%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.56%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.56%
c. Funded percentage	77%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.56%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	14.26%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	21.38%
7. Advisory July 1, 2017 total pension rate, before adjustment	29.25%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(7.87%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	11.71%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.84%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	21.38%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.39%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.39%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	21.38%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.39%	14.61%
b. Tier 1/Tier 2 UAL rate	3.84%	3.06%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	21.38%	17.82%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$7,218,973	$3,011,589	$10,230,562
Tier 2	6,799,904	3,385,725	10,185,629
Tier 1/Tier 2 valuation payroll	14,018,877	6,397,314	20,416,191
OPSRP valuation payroll	10,786,395	2,770,850	13,557,245
Combined valuation payroll	**$24,805,272**	**$9,168,164**	**$33,973,436**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	112	120	225	457	118	125	211	454
Police & Fire	37	45	41	123	38	46	35	119
Total	149	165	266	580	156	171	246	573
Active Members with previous service segments with the employer								
General Service	83	93	N/A	176	84	96	N/A	180
Police & Fire	22	10	N/A	32	22	11	N/A	33
Total	105	103	N/A	208	106	107	N/A	213
Dormant Members								
General Service	60	85	34	179	65	85	34	184
Police & Fire	11	6	1	18	14	6	0	20
Total	71	91	35	197	79	91	34	204
Retired Members and Beneficiaries								
General Service	477	52	6	535	466	47	4	517
Police & Fire	114	8	1	123	109	6	1	116
Total	591	60	7	658	575	53	5	633
Grand Total Number of Members	**916**	**419**	**308**	**1,643**	**916**	**422**	**285**	**1,623**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29		1								**1**
30-34			3							**3**
35-39		2	18	6						**26**
40-44			18	22	5					**45**
45-49			15	29	10	2				**56**
50-54	1		12	15	19	14				**61**
55-59		2	10	17	7	12	3	2		**53**
60-64			9	16	11	7	4	1		**48**
65-69			5	5	4	2	2			**18**
70-74				2		1				**3**
75+										
Total	**1**	**5**	**90**	**112**	**56**	**38**	**9**	**3**	**0**	**314**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34	3	97
35-39	10	598
40-44	16	710
45-49	15	762
50-54	37	816
55-59	40	621
60-64	21	1,520
65-69	15	1,303
70-74	3	254
75+	2	1,534
Total	162	860

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	3	1,691
45-49	1	677
50-54	11	2,182
55-59	39	1,305
60-64	138	1,700
65-69	155	1,156
70-74	118	1,245
75-79	84	1,292
80-84	50	1,159
85-89	24	1,055
90-94	19	951
95-99	9	1,275
100+		
Total	651	1,325

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Malheur County/2039
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Malheur County/2039

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Malheur County -- #2039

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Malheur County to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Malheur County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Malheur County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.62%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(1.46%)	(1.46%)	(1.46%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.17%**	**7.65%**	**12.45%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**17.67%**	**8.08%**	**12.88%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 91%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	13.16%	13.16%
Minimum 2017-2019 Rate	10.16%	7.16%
Maximum 2017-2019 Rate	16.16%	19.16%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$30,796,030	$34,090,448	$3,294,418	90%	$7,381,830	45%
12/31/2010	32,615,328	35,461,722	2,846,394	92%	7,631,723	37%
12/31/2011	32,516,737	37,111,809	4,595,072	88%	7,459,213	62%
12/31/2012	36,288,108	37,610,222	1,322,114	96%	7,739,628	17%
12/31/2013	40,424,622	38,745,745	(1,678,877)	104%	7,615,815	(22%)
12/31/2014	41,395,207	45,550,816	4,155,609	91%	7,701,161	54%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Malheur County

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$4,155,609	($1,678,877)
Allocated pooled OPSRP UAL	880,410	538,484
Side account	0	0
Net unfunded pension actuarial accrued liability	5,036,019	(1,140,393)
Combined valuation payroll	7,701,161	7,615,815
Net pension UAL as a percentage of payroll	65%	(15%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$61,213	$105,411

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$767,749	$671,648
Tier 1/Tier 2 valuation payroll	4,357,589	4,596,005
Tier 1/Tier 2 pension normal cost rate	17.62%	14.61%
Tier 1/ Tier 2 Actuarial accrued liability	$45,550,816	$38,745,745
Actuarial asset value	41,395,207	40,424,622
Tier 1/Tier 2 Unfunded actuarial accrued liability	4,155,609	(1,678,877)
Tier 1/ Tier 2 Funded status	91%	104%
Combined valuation payroll	$7,701,161	$7,615,815
Tier 1/Tier 2 UAL as a percentage of payroll	54%	(22%)
Tier 1/Tier 2 UAL rate	(1.46%)	(1.45%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	81	92
Tier 1/Tier 2 dormant members	65	60
Tier 1/Tier 2 retirees and beneficiaries	174	166

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	7,701,161	7,615,815
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$7,396,722	$7,500,360
2. Employer reserves	23,415,109	22,459,904
3. Benefits in force reserve	10,583,376	10,464,358
4. Total market value of assets ***(1. + 2. + 3.)***	**$41,395,207**	**$40,424,622**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$40,424,622
2. Regular employer contributions	511,729
3. Benefit payments and expense	(1,747,923)
4. Adjustments [1]	(649,589)
5. Interest credited	2,856,369
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$41,395,207**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Tier 1 Police & Fire	$136,533	$119,902
Tier 1 General Service	232,689	225,071
Tier 2 Police & Fire	190,323	136,824
Tier 2 General Service	208,204	189,851
Total	**$767,749**	**$671,648**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$644,899	$767,749	$122,850

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$3,992,438	$3,522,946
▪ Tier 1 General Service	8,581,258	7,725,656
▪ Tier 2 Police & Fire	3,181,154	2,455,864
▪ Tier 2 General Service	4,108,873	3,711,298
▪ **Total Active Members**	**$19,863,723**	**$17,415,764**
Dormant Members	5,155,606	4,461,804
Retired Members and Beneficiaries	20,531,487	16,868,177
Total Actuarial Accrued Liability	**$45,550,816**	**$38,745,745**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$40,478,911	$45,550,816	$5,071,905

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$45,550,816	$38,745,745
2. Actuarial value of assets	41,395,207	40,424,622
3. Unfunded accrued liability *(1. – 2.)*	4,155,609	(1,678,877)
4. Funded percentage *(2. ÷ 1.)*	91%	104%
5. Combined valuation payroll	$7,701,161	$7,615,815
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	54%	(22%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($1,678,877)	($121,517)	($125,099)	($1,682,459)	($126,027)
December 31, 2014	N/A	N/A	N/A	$5,838,068	$422,436
Total				**$4,155,609**	**$296,409**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$38,745,745
b. Normal cost at December 31, 2013	671,648
c. Benefit payments during 2014	(1,734,461)
d. Interest at 7.75% to December 31, 2014	2,961,611
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	40,644,543
f. Change in actuarial accrued liability due to assumption, method, and plan changes	5,071,905
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	45,716,448
2. Actuarial accrued liability at December 31, 2014	45,550,816
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	165,632
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	40,424,622
b. Contributions for 2014[1]	511,729
c. Benefit payments and expenses during 2014	(1,747,923)
d. Interest at 7.75% to December 31, 2014	3,085,006
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	42,273,433
5. Actuarial value of assets at December 31, 2014	41,395,207
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(878,226)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($712,594)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($1,678,877)**
2. Expected increase	49,987
3. Liability (gain)/loss	(165,632)
4. Asset (gain)/loss	878,226
5. Change due to changes in assumptions, methods, and plan provisions	5,071,905
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$4,155,609**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$136,533	$654,065	20.87%	$119,902	$696,289	17.22%
Tier 1 General Service	232,689	1,028,989	22.61%	225,071	1,222,662	18.41%
Tier 2 Police & Fire	190,323	952,244	19.99%	136,824	840,298	16.28%
Tier 2 General Service	208,204	1,722,291	12.09%	189,851	1,836,756	10.34%
Total	**$767,749**	**$4,357,589**	**17.62%**	**$671,648**	**$4,596,005**	**14.61%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$4,155,609	($1,678,877)
2. Next year's Tier 1/Tier 2 UAL payment	296,409	(121,517)
3. Combined valuation payroll	7,701,161	7,615,815
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.85%	(1.60%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.62%	14.61%
b. Tier 1/Tier 2 UAL rate	3.85%	(1.60%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	21.62%	13.16%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.16%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.16%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.63%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	91%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.16%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	16.16%
7. Advisory July 1, 2017 total pension rate, before adjustment	21.62%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.46%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	3.85%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.61%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	16.16%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.62%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.62%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.16%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.62%	14.61%
b. Tier 1/Tier 2 UAL rate	(1.61%)	(1.60%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	16.16%	13.16%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,028,989	$654,065	$1,683,054
Tier 2	1,722,291	952,244	2,674,535
Tier 1/Tier 2 valuation payroll	2,751,280	1,606,309	4,357,589
OPSRP valuation payroll	2,257,558	1,086,014	3,343,572
Combined valuation payroll	**$5,008,838**	**$2,692,323**	**$7,701,161**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	20	36	52	108	25	42	52	119
Police & Fire	10	15	19	44	11	14	17	42
Total	30	51	71	152	36	56	69	161
Active Members with previous service segments with the employer								
General Service	19	14	N/A	33	21	14	N/A	35
Police & Fire	7	7	N/A	14	7	6	N/A	13
Total	26	21	N/A	47	28	20	N/A	48
Dormant Members								
General Service	31	21	11	63	32	16	8	56
Police & Fire	6	7	0	13	6	6	1	13
Total	37	28	11	76	38	22	9	69
Retired Members and Beneficiaries								
General Service	123	13	2	138	119	11	2	132
Police & Fire	36	2	0	38	34	2	0	36
Total	159	15	2	176	153	13	2	168
Grand Total Number of Members	**252**	**115**	**84**	**451**	**255**	**111**	**80**	**446**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39			3	2						**5**
40-44			8	5	1					**14**
45-49			7	6	3					**16**
50-54			6	3	4	1				**14**
55-59			5	2	6	1	1			**15**
60-64			3	4	1	1	1	1	1	**12**
65-69				1	1	1			1	**4**
70-74				1						**1**
75+										
Total	**0**	**0**	**32**	**24**	**16**	**4**	**2**	**1**	**2**	**81**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	3	1,062
40-44	9	283
45-49	9	607
50-54	14	673
55-59	8	322
60-64	10	620
65-69	7	1,906
70-74	5	667
75+		
Total	65	709

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	1	336
45-49		
50-54	4	1,324
55-59	7	617
60-64	28	517
65-69	55	871
70-74	26	1,138
75-79	20	1,133
80-84	17	707
85-89	9	597
90-94	6	589
95-99	1	610
100+		
Total	174	840

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Mapleton Water District/2597
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Mapleton Water District/2597

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Mapleton Water District -- #2597

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Mapleton Water District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mapleton Water District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Mapleton Water District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.44%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(1.42%)	(1.42%)	(1.42%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.03%**	**7.69%**	**12.49%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**16.53%**	**8.12%**	**12.92%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 98%.

Funded Status as of December 31, 2015	**70% to 130%**	**Under 60% or Over 140%**
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	12.02%	12.02%
Minimum 2017-2019 Rate	9.02%	6.02%
Maximum 2017-2019 Rate	15.02%	18.02%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$138,450	$170,867	$32,417	81%	$60,927	53%
12/31/2010	139,940	157,303	17,363	89%	69,364	25%
12/31/2011	147,113	169,350	22,237	87%	62,272	36%
12/31/2012	172,579	179,803	7,224	96%	63,361	11%
12/31/2013	200,313	187,040	(13,273)	107%	62,438	(21%)
12/31/2014	217,395	221,818	4,423	98%	66,719	7%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mapleton Water District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$4,423	($13,273)
Allocated pooled OPSRP UAL	7,627	4,415
Side account	0	0
Net unfunded pension actuarial accrued liability	12,050	(8,858)
Combined valuation payroll	66,719	62,438
Net pension UAL as a percentage of payroll	18%	(14%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$530	$864

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$8,530	$6,966
Tier 1/Tier 2 valuation payroll	51,890	51,935
Tier 1/Tier 2 pension normal cost rate	16.44%	13.41%
Tier 1/ Tier 2 Actuarial accrued liability	$221,818	$187,040
Actuarial asset value	217,395	200,313
Tier 1/Tier 2 Unfunded actuarial accrued liability	4,423	(13,273)
Tier 1/ Tier 2 Funded status	98%	107%
Combined valuation payroll	$66,719	$62,438
Tier 1/Tier 2 UAL as a percentage of payroll	7%	(21%)
Tier 1/Tier 2 UAL rate	(1.42%)	(1.39%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	66,719	62,438
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$53,969	$50,272
2. Employer reserves	140,366	124,627
3. Benefits in force reserve	23,060	25,414
4. Total market value of assets ***(1. + 2. + 3.)***	**$217,395**	**$200,313**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$200,313
2.	Regular employer contributions	6,284
3.	Benefit payments and expense	(3,809)
4.	Adjustments [1]	(258)
5.	Interest credited	14,864
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$217,395**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	8,530	6,966
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$8,530**	**$6,966**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$7,120	$8,530	$1,410

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	177,082	146,073
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$177,082**	**$146,073**
Dormant Members	0	0
Retired Members and Beneficiaries	44,736	40,967
Total Actuarial Accrued Liability	**$221,818**	**$187,040**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$194,084	$221,818	$27,734

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$221,818	$187,040
2. Actuarial value of assets	217,395	200,313
3. Unfunded accrued liability *(1. – 2.)*	4,423	(13,273)
4. Funded percentage *(2. ÷ 1.)*	98%	107%
5. Combined valuation payroll	$66,719	$62,438
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	7%	(21%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($13,273)	($961)	($989)	($13,301)	($996)
December 31, 2014	N/A	N/A	N/A	$17,724	$1,282
Total				**$4,423**	**$286**

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Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$187,040
b. Normal cost at December 31, 2013	6,966
c. Benefit payments during 2014	(3,779)
d. Interest at 7.75% to December 31, 2014	14,619
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	204,846
f. Change in actuarial accrued liability due to assumption, method, and plan changes	27,734
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	232,580
2. Actuarial accrued liability at December 31, 2014	221,818
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	10,762
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	200,313
b. Contributions for 2014[1]	6,284
c. Benefit payments and expenses during 2014	(3,809)
d. Interest at 7.75% to December 31, 2014	15,620
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	218,409
5. Actuarial value of assets at December 31, 2014	217,395
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,014)
7. Total actuarial gain/(loss) *(3. + 6.)*	**$9,748**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($13,273)**
2. Expected increase	(290)
3. Liability (gain)/loss	(10,762)
4. Asset (gain)/loss	1,014
5. Change due to changes in assumptions, methods, and plan provisions	27,734
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$4,423**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			**December 31, 2013**		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	8,530	51,890	16.44%	6,966	51,935	13.41%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$8,530**	**$51,890**	**16.44%**	**$6,966**	**$51,935**	**13.41%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$4,423	($13,273)
2. Next year's Tier 1/Tier 2 UAL payment	286	(961)
3. Combined valuation payroll	66,719	62,438
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.43%	(1.54%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.44%	13.41%
b. Tier 1/Tier 2 UAL rate	0.43%	(1.54%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.02%	12.02%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.02%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.02%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.40%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	98%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.02%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	15.02%
7. Advisory July 1, 2017 total pension rate, before adjustment	17.02%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.00%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	0.43%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.57%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	15.02%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.44%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.44%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.02%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.44%	13.41%
b. Tier 1/Tier 2 UAL rate	(1.57%)	(1.54%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	15.02%	12.02%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$51,890	$0	$51,890
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	51,890	0	51,890
OPSRP valuation payroll	14,829	0	14,829
Combined valuation payroll	**$66,719**	**$0**	**$66,719**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	1	2	1	0	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	0	1	2
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**2**	**0**	**1**	**3**	**2**	**0**	**1**	**3**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64				1						**1**
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84	1	534
85-89		
90-94		
95-99		
100+		
Total	1	534

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Mid-Columbia Fire And Rescue V1-801/2877
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Mid-Columbia Fire And Rescue V1-801/2877

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Mid-Columbia Fire And Rescue V1-801 -- #2877

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Mid-Columbia Fire And Rescue V1-801 to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mid-Columbia Fire And Rescue V1-801.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Mid-Columbia Fire And Rescue V1-801

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.84%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	0.23%	0.23%	0.23%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.08%**	**9.34%**	**14.14%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.58%**	**9.77%**	**14.57%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 62%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	13.98%	13.98%
Minimum 2017-2019 Rate	10.98%	7.98%
Maximum 2017-2019 Rate	16.98%	19.98%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$0	$0	$0	0%	$0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	0	0%
12/31/2012	4,351	7,233	2,882	60%	107,251	3%
12/31/2013	19,554	27,204	7,650	72%	1,870,603	0%
12/31/2014	34,897	55,997	21,100	62%	1,889,293	1%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mid-Columbia Fire And Rescue V1-801

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$21,100	$7,650
Allocated pooled OPSRP UAL	215,987	132,263
Side account	0	0
Net unfunded pension actuarial accrued liability	237,087	139,913
Combined valuation payroll	1,889,293	1,870,603
Net pension UAL as a percentage of payroll	13%	7%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$15,017	$25,891

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$14,504	$11,816
Tier 1/Tier 2 valuation payroll	86,106	85,608
Tier 1/Tier 2 pension normal cost rate	16.84%	13.80%
Tier 1/ Tier 2 Actuarial accrued liability	$55,997	$27,204
Actuarial asset value	34,897	19,554
Tier 1/Tier 2 Unfunded actuarial accrued liability	21,100	7,650
Tier 1/ Tier 2 Funded status	62%	72%
Combined valuation payroll	$1,889,293	$1,870,603
Tier 1/Tier 2 UAL as a percentage of payroll	1%	0%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	0.23%	0.18%
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	1,889,293	1,870,603
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$0	$0
2. Employer reserves	34,897	19,554
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$34,897**	**$19,554**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$19,554
2.	Regular employer contributions	14,954
3.	Benefit payments and expense	0
4.	Adjustments [1]	(2,273)
5.	Interest credited	2,662
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$34,897**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$14,504	$11,816
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$14,504**	**$11,816**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$12,008	$14,504	$2,496

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$55,997	$27,204
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$55,997**	**$27,204**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$55,997**	**$27,204**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$46,243	$55,997	$9,754

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$55,997	$27,204
2. Actuarial value of assets	34,897	19,554
3. Unfunded accrued liability *(1. – 2.)*	21,100	7,650
4. Funded percentage *(2. ÷ 1.)*	62%	72%
5. Combined valuation payroll	$1,889,293	$1,870,603
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	1%	0%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$7,650	$554	$570	$7,666	$574
December 31, 2014	N/A	N/A	N/A	$13,434	$972
Total				**$21,100**	**$1,546**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$27,204
b. Normal cost at December 31, 2013	11,816
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	2,566
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	41,586
f. Change in actuarial accrued liability due to assumption, method, and plan changes	9,754
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	51,340
2. Actuarial accrued liability at December 31, 2014	55,997
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(4,657)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	19,554
b. Contributions for 2014[1]	14,954
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	2,095
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	36,603
5. Actuarial value of assets at December 31, 2014	34,897
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,706)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($6,363)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$7,650**
2. Expected increase	(2,667)
3. Liability (gain)/loss	4,657
4. Asset (gain)/loss	1,706
5. Change due to changes in assumptions, methods, and plan provisions	9,754
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$21,100**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$14,504	$86,106	16.84%	$11,816	$85,608	13.80%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$14,504**	**$86,106**	**16.84%**	**$11,816**	**$85,608**	**13.80%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$21,100	$7,650
2. Next year's Tier 1/Tier 2 UAL payment	1,546	554
3. Combined valuation payroll	1,889,293	1,870,603
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.08%	0.03%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.84%	13.80%
b. Tier 1/Tier 2 UAL rate	0.08%	0.03%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.07%	13.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.98%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.98%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.80%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	62%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	5.40%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.58%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	19.38%
7. Advisory July 1, 2017 total pension rate, before adjustment	17.07%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	0.08%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.08%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	17.07%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.84%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.84%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.07%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.84%	13.80%
b. Tier 1/Tier 2 UAL rate	0.08%	0.03%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	17.07%	13.98%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$86,106	$86,106
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	86,106	86,106
OPSRP valuation payroll	55,956	1,747,231	1,803,187
Combined valuation payroll	**$55,956**	**$1,833,337**	**$1,889,293**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	1	0	21	22	1	0	19	20
Total	1	0	22	23	1	0	20	21
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**1**	**0**	**22**	**23**	**1**	**0**	**20**	**21**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49					1					**1**
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Millington Rural Fire Protection District/2782
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Millington Rural Fire Protection District/2782

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Millington Rural Fire Protection District -- #2782

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Millington Rural Fire Protection District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Millington Rural Fire Protection District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Millington Rural Fire Protection District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	22.38%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(13.91%)	(13.91%)	(13.91%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.48%**	**0.00%**	**0.00%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**9.98%**	**0.43%**	**0.43%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 128%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	5.47%	5.47%
Minimum 2017-2019 Rate	2.47%	0.00%
Maximum 2017-2019 Rate	8.47%	11.47%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$220,360	$176,331	($44,029)	125%	$51,690	(85%)
12/31/2010	246,303	186,201	(60,102)	132%	51,994	(116%)
12/31/2011	258,024	202,616	(55,408)	127%	51,989	(107%)
12/31/2012	298,900	214,629	(84,271)	139%	52,504	(161%)
12/31/2013	343,781	233,282	(110,499)	147%	53,819	(205%)
12/31/2014	371,916	290,282	(81,634)	128%	55,985	(146%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Millington Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	($81,634)	($110,499)
Allocated pooled OPSRP UAL	6,400	3,805
Side account	0	0
Net unfunded pension actuarial accrued liability	(75,234)	(106,694)
Combined valuation payroll	55,985	53,819
Net pension UAL as a percentage of payroll	(134%)	(198%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$445	$745

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$12,531	$10,046
Tier 1/Tier 2 valuation payroll	55,985	53,819
Tier 1/Tier 2 pension normal cost rate	22.38%	20.18%
Tier 1/ Tier 2 Actuarial accrued liability	$290,282	$233,282
Actuarial asset value	371,916	343,781
Tier 1/Tier 2 Unfunded actuarial accrued liability	(81,634)	(110,499)
Tier 1/ Tier 2 Funded status	128%	147%
Combined valuation payroll	$55,985	$53,819
Tier 1/Tier 2 UAL as a percentage of payroll	(146%)	(205%)
Tier 1/Tier 2 UAL rate	(13.91%)	(14.71%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	55,985	53,819
3. Amortization factor	10.118	10.703
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$91,953	$85,653
2. Employer reserves	279,963	258,128
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$371,916**	**$343,781**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$343,781
2.	Regular employer contributions	2,904
3.	Benefit payments and expense	0
4.	Adjustments [1]	(165)
5.	Interest credited	25,396
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$371,916**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$12,531	$10,046
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$12,531**	**$10,046**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$10,479	$12,531	$2,052

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$290,282	$233,282
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$290,282**	**$233,282**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$290,282**	**$233,282**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$257,145	$290,282	$33,137

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$290,282	$233,282
2. Actuarial value of assets	371,916	343,781
3. Unfunded accrued liability *(1. – 2.)*	(81,634)	(110,499)
4. Funded percentage *(2. ÷ 1.)*	128%	147%
5. Combined valuation payroll	$55,985	$53,819
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(146%)	(205%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($110,499)	($7,998)	($8,234)	($110,735)	($8,295)
December 31, 2014	N/A	N/A	N/A	$29,101	$2,106
Total				**($81,634)**	**($6,189)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$233,282
b. Normal cost at December 31, 2013	10,046
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	18,469
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	261,797
f. Change in actuarial accrued liability due to assumption, method, and plan changes	33,137
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	294,934
2. Actuarial accrued liability at December 31, 2014	290,282
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	4,652
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	343,781
b. Contributions for 2014[1]	2,904
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	26,756
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	373,440
5. Actuarial value of assets at December 31, 2014	371,916
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,524)
7. Total actuarial gain/(loss) *(3. + 6.)*	**$3,128**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($110,499)**
2. Expected increase	(1,144)
3. Liability (gain)/loss	(4,652)
4. Asset (gain)/loss	1,524
5. Change due to changes in assumptions, methods, and plan provisions	33,137
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**($81,634)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$12,531	$55,985	22.38%	$10,046	$53,819	18.67%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$12,531**	**$55,985**	**22.38%**	**$10,046**	**$53,819**	**18.67%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	($81,634)	($110,499)
2. Next year's Tier 1/Tier 2 UAL payment	(6,189)	(7,998)
3. Combined valuation payroll	55,985	53,819
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(11.05%)	(14.86%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	22.38%	18.67%
b. Tier 1/Tier 2 UAL rate	(11.05%)	(14.86%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	11.48%	3.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.47%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.47%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.09%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	128%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.47%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	8.47%
7. Advisory July 1, 2017 total pension rate, before adjustment	11.48%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.01%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	(11.05%)
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(14.06%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	8.47%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	22.38%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	22.38%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.47%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	22.38%	20.18%
b. Tier 1/Tier 2 UAL rate	(14.06%)	(14.86%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	8.47%	5.47%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$55,985	$55,985
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	55,985	55,985
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$0**	**$55,985**	**$55,985**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	1	0	0	1	1	0	0	1
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59					1					1
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	1	0	0	0	0	1

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.
- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.
- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.
- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.
- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Mosier Fire District/2873
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Mosier Fire District/2873

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA	Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary	Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Mosier Fire District -- #2873

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Mosier Fire District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mosier Fire District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Mosier Fire District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.01%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(2.56%)	(2.56%)	(2.56%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.46%**	**6.55%**	**11.35%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**15.96%**	**6.98%**	**11.78%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 100%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	11.45%	11.45%
Minimum 2017-2019 Rate	8.45%	5.45%
Maximum 2017-2019 Rate	14.45%	17.45%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$0	$0	$0	0%	$0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	36,000	0%
12/31/2012	(15)	0	15	0%	38,970	0%
12/31/2013	(517)	0	517	0%	38,765	1%
12/31/2014	(1,516)	0	1,516	0%	38,534	4%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mosier Fire District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$1,516	$517
Allocated pooled OPSRP UAL	4,405	2,741
Side account	0	0
Net unfunded pension actuarial accrued liability	5,921	3,258
Combined valuation payroll	38,534	38,765
Net pension UAL as a percentage of payroll	15%	8%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$306	$537

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$0	$0
Tier 1/Tier 2 valuation payroll	0	0
Tier 1/Tier 2 pension normal cost rate	17.01%	14.24%
Tier 1/ Tier 2 Actuarial accrued liability	$0	$0
Actuarial asset value	(1,516)	(517)
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,516	517
Tier 1/ Tier 2 Funded status	0%	0%
Combined valuation payroll	$38,534	$38,765
Tier 1/Tier 2 UAL as a percentage of payroll	4%	1%
Tier 1/Tier 2 UAL rate	(2.56%)	(2.79%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	38,534	38,765
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$0	$0
2. Employer reserves	(1,516)	(517)
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**($1,516)**	**($517)**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	($517)
2.	Regular employer contributions	(853)
3.	Benefit payments and expense	0
4.	Adjustments [1]	(49)
5.	Interest credited	(96)
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**($1,516)**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$0**	**$0**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$0**	**$0**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$0**	**$0**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$0	$0
2. Actuarial value of assets	(1,516)	(517)
3. Unfunded accrued liability *(1. – 2.)*	1,516	517
4. Funded percentage *(2. ÷ 1.)*	100%	100%
5. Combined valuation payroll	$38,534	$38,765
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	4%	1%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$517	$37	$39	$519	$39
December 31, 2014	N/A	N/A	N/A	$997	$72
Total				**$1,516**	**$111**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$0
b. Normal cost at December 31, 2013	0
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	0
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	0
2. Actuarial accrued liability at December 31, 2014	0
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	0
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	(517)
b. Contributions for 2014[1]	(853)
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	(73)
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	(1,444)
5. Actuarial value of assets at December 31, 2014	(1,516)
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(72)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($72)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$517**
2. Expected increase	927
3. Liability (gain)/loss	0
4. Asset (gain)/loss	72
5. Change due to changes in assumptions, methods, and plan provisions	0
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$1,516**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$0**	**$0**	**17.01%**	**$0**	**$0**	**14.24%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$1,516	$517
2. Next year's Tier 1/Tier 2 UAL payment	111	37
3. Combined valuation payroll	38,534	38,765
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.29%	0.10%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.01%	14.24%
b. Tier 1/Tier 2 UAL rate	0.29%	0.10%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	17.45%	14.49%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.45%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.45%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.29%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	100%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.45%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	14.45%
7. Advisory July 1, 2017 total pension rate, before adjustment	17.45%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.00%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	0.29%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.71%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	14.45%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.01%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.01%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.45%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.01%	14.24%
b. Tier 1/Tier 2 UAL rate	(2.71%)	(2.94%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	14.45%	11.45%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	0	38,534	38,534
Combined valuation payroll	**$0**	**$38,534**	**$38,534**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	1	1	0	0	1	1
Total	0	0	1	1	0	0	1	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Mt Angel Fire District/2861
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

November 2015
Mt Angel Fire District/2861

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System’s staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System’s financial condition as of a single date. It can neither predict the System’s future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System’s funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Mt Angel Fire District/2861

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Mt Angel Fire District -- #2861

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Mt Angel Fire District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mt Angel Fire District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Mt Angel Fire District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	18.52%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(3.38%)	(3.38%)	(3.38%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.15%**	**5.73%**	**10.53%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**16.65%**	**6.16%**	**10.96%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 121%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	12.14%	12.14%
Minimum 2017-2019 Rate	9.14%	6.14%
Maximum 2017-2019 Rate	15.14%	18.14%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$7,169	$0	($7,169)	0%	$21,279	(34%)
12/31/2010	7,032	0	(7,032)	0%	24,423	(29%)
12/31/2011	6,360	0	(6,360)	100%	24,660	(26%)
12/31/2012	7,147	0	(7,147)	0%	15,167	(47%)
12/31/2013	7,909	1,744	(6,165)	453%	30,273	(20%)
12/31/2014	8,867	7,355	(1,512)	121%	63,558	(2%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mt Angel Fire District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	($1,512)	($6,165)
Allocated pooled OPSRP UAL	7,266	2,140
Side account	0	0
Net unfunded pension actuarial accrued liability	5,754	(4,025)
Combined valuation payroll	63,558	30,273
Net pension UAL as a percentage of payroll	9%	(13%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$505	$419

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$5,658	$1,852
Tier 1/Tier 2 valuation payroll	30,557	11,981
Tier 1/Tier 2 pension normal cost rate	18.52%	15.46%
Tier 1/ Tier 2 Actuarial accrued liability	$7,355	$1,744
Actuarial asset value	8,867	7,909
Tier 1/Tier 2 Unfunded actuarial accrued liability	(1,512)	(6,165)
Tier 1/ Tier 2 Funded status	121%	453%
Combined valuation payroll	$63,558	$30,273
Tier 1/Tier 2 UAL as a percentage of payroll	(2%)	(20%)
Tier 1/Tier 2 UAL rate	(3.38%)	(3.32%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	0	0
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	63,558	30,273
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$0	$0
2. Employer reserves	8,867	7,909
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$8,867**	**$7,909**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$7,909
2. Regular employer contributions	427
3. Benefit payments and expense	0
4. Adjustments [1]	(76)
5. Interest credited	607
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$8,867**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	5,658	1,852
Tier 2 General Service	0	0
Total	**$5,658**	**$1,852**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$4,633	$5,658	$1,025

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	7,355	1,744
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$7,355**	**$1,744**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$7,355**	**$1,744**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$6,147	$7,355	$1,208

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$7,355	$1,744
2. Actuarial value of assets	8,867	7,909
3. Unfunded accrued liability *(1. – 2.)*	(1,512)	(6,165)
4. Funded percentage *(2. ÷ 1.)*	121%	454%
5. Combined valuation payroll	$63,558	$30,273
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(2%)	(20%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($6,165)	($446)	($459)	($6,178)	($463)
December 31, 2014	N/A	N/A	N/A	$4,666	$338
Total				**($1,512)**	**($125)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$1,744
b. Normal cost at December 31, 2013	1,852
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	207
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	3,803
f. Change in actuarial accrued liability due to assumption, method, and plan changes	1,208
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	5,011
2. Actuarial accrued liability at December 31, 2014	7,355
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(2,344)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	7,909
b. Contributions for 2014[1]	427
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	629
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	8,965
5. Actuarial value of assets at December 31, 2014	8,867
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(98)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($2,442)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($6,165)**
2. Expected increase	1,003
3. Liability (gain)/loss	2,344
4. Asset (gain)/loss	98
5. Change due to changes in assumptions, methods, and plan provisions	1,208
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**($1,512)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	5,658	30,557	18.52%	1,852	11,981	15.46%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$5,658**	**$30,557**	**18.52%**	**$1,852**	**$11,981**	**15.46%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	($1,512)	($6,165)
2. Next year's Tier 1/Tier 2 UAL payment	(125)	(446)
3. Combined valuation payroll	63,558	30,273
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.20%)	(1.47%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.52%	15.46%
b. Tier 1/Tier 2 UAL rate	(0.20%)	(1.47%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	18.47%	14.14%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.14%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.14%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.43%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	121%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.14%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	15.14%
7. Advisory July 1, 2017 total pension rate, before adjustment	18.47%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.33%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	(0.20%)
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.53%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	15.14%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	18.52%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	18.52%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.14%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.52%	15.46%
b. Tier 1/Tier 2 UAL rate	(3.53%)	(3.47%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	15.14%	12.14%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	30,557	30,557
Tier 1/Tier 2 valuation payroll	0	30,557	30,557
OPSRP valuation payroll	33,001	0	33,001
Combined valuation payroll	**$33,001**	**$30,557**	**$63,558**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	1	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	1	N/A	1
Police & Fire	0	1	N/A	1	0	1	N/A	1
Total	0	1	N/A	1	0	2	N/A	2
Dormant Members								
General Service	0	0	1	1	0	0	1	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	1	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**1**	**2**	**3**	**0**	**2**	**2**	**4**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.
- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.
- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.
- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.
- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Nehalem Bay Wastewater Agency/2724
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Nehalem Bay Wastewater Agency/2724

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Nehalem Bay Wastewater Agency -- #2724

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Nehalem Bay Wastewater Agency to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Nehalem Bay Wastewater Agency.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Nehalem Bay Wastewater Agency

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.07%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(5.66%)	(5.66%)	(5.66%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.42%**	**3.45%**	**8.25%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**12.92%**	**3.88%**	**8.68%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 96%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	8.41%	8.41%
Minimum 2017-2019 Rate	5.41%	2.41%
Maximum 2017-2019 Rate	11.41%	14.41%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$1,330,230	$1,423,510	$93,280	93%	$254,429	37%
12/31/2010	1,376,367	1,506,536	130,169	91%	243,310	54%
12/31/2011	1,373,769	1,556,184	182,415	88%	289,012	63%
12/31/2012	1,530,538	1,473,807	(56,731)	104%	328,849	(17%)
12/31/2013	1,718,009	1,554,879	(163,130)	110%	349,854	(47%)
12/31/2014	1,791,852	1,869,020	77,168	96%	374,854	21%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Nehalem Bay Wastewater Agency

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$77,168	($163,130)
Allocated pooled OPSRP UAL	42,854	24,737
Side account	0	0
Net unfunded pension actuarial accrued liability	120,022	(138,393)
Combined valuation payroll	374,854	349,854
Net pension UAL as a percentage of payroll	32%	(40%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,980	$4,842

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$25,815	$20,567
Tier 1/Tier 2 valuation payroll	151,265	142,718
Tier 1/Tier 2 pension normal cost rate	17.07%	14.41%
Tier 1/ Tier 2 Actuarial accrued liability	$1,869,020	$1,554,879
Actuarial asset value	1,791,852	1,718,009
Tier 1/Tier 2 Unfunded actuarial accrued liability	77,168	(163,130)
Tier 1/ Tier 2 Funded status	96%	110%
Combined valuation payroll	$374,854	$349,854
Tier 1/Tier 2 UAL as a percentage of payroll	21%	(47%)
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(5.66%)	(6.00%)
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	5	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	374,854	349,854
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$277,817	$258,786
2. Employer reserves	947,919	865,011
3. Benefits in force reserve	566,117	594,212
4. Total market value of assets *(1. + 2. + 3.)*	**$1,791,852**	**$1,718,009**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$1,718,009
2.	Regular employer contributions	19,000
3.	Benefit payments and expense	(93,498)
4.	Adjustments [1]	26,196
5.	Interest credited	122,146
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,791,852**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	25,815	20,567
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$25,815**	**$20,567**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$21,926	$25,815	$3,889

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	770,768	597,030
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$770,768**	**$597,030**
Dormant Members	0	0
Retired Members and Beneficiaries	1,098,252	957,849
Total Actuarial Accrued Liability	**$1,869,020**	**$1,554,879**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,655,444	$1,869,020	$213,576

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$1,869,020	$1,554,879
2. Actuarial value of assets	1,791,852	1,718,009
3. Unfunded accrued liability *(1. – 2.)*	77,168	(163,130)
4. Funded percentage *(2. ÷ 1.)*	96%	110%
5. Combined valuation payroll	$374,854	$349,854
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	21%	(47%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($163,130)	($11,807)	($12,155)	($163,478)	($12,246)
December 31, 2014	N/A	N/A	N/A	$240,646	$17,413
Total				**$77,168**	**$5,167**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$1,554,879
b. Normal cost at December 31, 2013	20,567
c. Benefit payments during 2014	(92,778)
d. Interest at 7.75% to December 31, 2014	117,705
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,600,373
f. Change in actuarial accrued liability due to assumption, method, and plan changes	213,576
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	1,813,949
2. Actuarial accrued liability at December 31, 2014	1,869,020
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(55,071)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	1,718,009
b. Contributions for 2014[1]	19,000
c. Benefit payments and expenses during 2014	(93,498)
d. Interest at 7.75% to December 31, 2014	130,259
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	1,773,769
5. Actuarial value of assets at December 31, 2014	1,791,852
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	18,083
7. Total actuarial gain/(loss) *(3. + 6.)*	**($36,988)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($163,130)**
2. Expected increase	(10,266)
3. Liability (gain)/loss	55,071
4. Asset (gain)/loss	(18,083)
5. Change due to changes in assumptions, methods, and plan provisions	213,576
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$77,168**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	25,815	151,265	17.07%	20,567	142,718	14.41%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$25,815**	**$151,265**	**17.07%**	**$20,567**	**$142,718**	**14.41%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$77,168	($163,130)
2. Next year's Tier 1/Tier 2 UAL payment	5,167	(11,807)
3. Combined valuation payroll	374,854	349,854
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	1.38%	(3.37%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.07%	14.41%
b. Tier 1/Tier 2 UAL rate	1.38%	(3.37%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	18.60%	11.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.41%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.41%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.68%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	96%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.41%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	11.41%
7. Advisory July 1, 2017 total pension rate, before adjustment	18.60%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(7.19%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	1.38%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.81%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	11.41%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.07%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.07%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.07%	14.41%
b. Tier 1/Tier 2 UAL rate	(5.81%)	(6.15%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	11.41%	8.41%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$151,265	$0	$151,265
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	151,265	0	151,265
OPSRP valuation payroll	223,589	0	223,589
Combined valuation payroll	**$374,854**	**$0**	**$374,854**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	0	4	6	2	0	4	6
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	4	6	2	0	4	6
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	5	0	0	5	5	0	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	5	0	0	5	5	0	0	5
Grand Total Number of Members	**7**	**0**	**4**	**11**	**7**	**0**	**4**	**11**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54						1				**1**
55-59						1				**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	2	1,699
65-69	2	1,392
70-74	1	505
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	5	1,338

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Neskowin Regional Sanitary Authority/2740
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Neskowin Regional Sanitary Authority/2740

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Neskowin Regional Sanitary Authority -- #2740

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Neskowin Regional Sanitary Authority to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Neskowin Regional Sanitary Authority.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Neskowin Regional Sanitary Authority

	Payroll		
		OPSRP	
	Tier 1/Tier 2	**General Service**	**Police & Fire**
Pension			
Normal cost rate	13.45%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(2.49%)	(2.49%)	(2.49%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**11.97%**	**6.62%**	**11.42%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**12.47%**	**7.05%**	**11.85%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 135%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	8.66%	8.66%
Minimum 2017-2019 Rate	5.66%	2.66%
Maximum 2017-2019 Rate	11.66%	14.66%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$162,588	$112,598	($49,990)	144%	$164,413	(30%)
12/31/2010	183,374	129,211	(54,163)	142%	167,047	(32%)
12/31/2011	188,492	141,097	(47,395)	134%	171,129	(28%)
12/31/2012	215,562	162,032	(53,530)	133%	178,643	(30%)
12/31/2013	246,337	176,503	(69,834)	140%	183,027	(38%)
12/31/2014	258,803	192,267	(66,536)	135%	188,956	(35%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Neskowin Regional Sanitary Authority

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	($66,536)	($69,834)
Allocated pooled OPSRP UAL	21,602	12,941
Side account	0	0
Net unfunded pension actuarial accrued liability	(44,934)	(56,893)
Combined valuation payroll	188,956	183,027
Net pension UAL as a percentage of payroll	(24%)	(31%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,502	$2,533

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$7,292	$5,993
Tier 1/Tier 2 valuation payroll	54,225	53,161
Tier 1/Tier 2 pension normal cost rate	13.45%	11.27%
Tier 1/ Tier 2 Actuarial accrued liability	$192,267	$176,503
Actuarial asset value	258,803	246,337
Tier 1/Tier 2 Unfunded actuarial accrued liability	(66,536)	(69,834)
Tier 1/ Tier 2 Funded status	135%	140%
Combined valuation payroll	$188,956	$183,027
Tier 1/Tier 2 UAL as a percentage of payroll	(35%)	(38%)
Tier 1/Tier 2 UAL rate	(2.49%)	(2.61%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	2	2
Tier 1/Tier 2 retirees and beneficiaries	2	2

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	188,956	183,027
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$22,418	$20,923
2. Employer reserves	221,673	209,629
3. Benefits in force reserve	14,712	15,785
4. Total market value of assets *(1. + 2. + 3.)*	**$258,803**	**$246,337**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$246,337
2. Regular employer contributions	(2,784)
3. Benefit payments and expense	(2,430)
4. Adjustments [1]	156
5. Interest credited	17,524
6. Total transferred from side accounts	0
7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*	**$258,803**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	7,292	5,993
Total	**$7,292**	**$5,993**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$6,137	$7,292	$1,155

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	118,037	93,653
▪ **Total Active Members**	**$118,037**	**$93,653**
Dormant Members	45,688	57,405
Retired Members and Beneficiaries	28,542	25,445
Total Actuarial Accrued Liability	**$192,267**	**$176,503**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$171,772	$192,267	$20,495

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$192,267	$176,503
2. Actuarial value of assets	258,803	246,337
3. Unfunded accrued liability *(1. – 2.)*	(66,536)	(69,834)
4. Funded percentage *(2. ÷ 1.)*	135%	140%
5. Combined valuation payroll	$188,956	$183,027
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(35%)	(38%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($69,834)	($5,055)	($5,204)	($69,983)	($5,242)
December 31, 2014	N/A	N/A	N/A	$3,447	$249
Total				**($66,536)**	**($4,993)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$176,503
b. Normal cost at December 31, 2013	5,993
c. Benefit payments during 2014	(2,411)
d. Interest at 7.75% to December 31, 2014	13,818
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	193,903
f. Change in actuarial accrued liability due to assumption, method, and plan changes	20,495
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	214,398
2. Actuarial accrued liability at December 31, 2014	192,267
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	22,131
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	246,337
b. Contributions for 2014[1]	(2,784)
c. Benefit payments and expenses during 2014	(2,430)
d. Interest at 7.75% to December 31, 2014	18,889
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	260,012
5. Actuarial value of assets at December 31, 2014	258,803
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,209)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$20,922**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($69,834)**
2. Expected increase	3,725
3. Liability (gain)/loss	(22,131)
4. Asset (gain)/loss	1,209
5. Change due to changes in assumptions, methods, and plan provisions	20,495
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**($66,536)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	7,292	54,225	13.45%	5,993	53,161	11.27%
Total	**$7,292**	**$54,225**	**13.45%**	**$5,993**	**$53,161**	**11.27%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	($66,536)	($69,834)
2. Next year's Tier 1/Tier 2 UAL payment	(4,993)	(5,055)
3. Combined valuation payroll	188,956	183,027
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.64%)	(2.76%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.45%	11.27%
b. Tier 1/Tier 2 UAL rate	(2.64%)	(2.76%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	10.96%	8.66%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.66%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.66%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.73%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	135%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	4.50%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	4.16%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	13.16%
7. Advisory July 1, 2017 total pension rate, before adjustment	10.96%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	(2.64%)
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(2.64%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	10.96%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.45%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.45%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	10.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.45%	11.27%
b. Tier 1/Tier 2 UAL rate	(2.64%)	(2.76%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	10.96%	8.66%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	54,225	0	54,225
Tier 1/Tier 2 valuation payroll	54,225	0	54,225
OPSRP valuation payroll	134,731	0	134,731
Combined valuation payroll	**$188,956**	**$0**	**$188,956**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	3	4	0	1	3	4
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	3	4	0	1	3	4
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	1	1	0	2	1	1	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	0	2	1	1	0	2
Retired Members and Beneficiaries								
General Service	2	0	0	2	2	0	0	2
Police & Fire	0	0	0	0	0	0	0	0
Total	2	0	0	2	2	0	0	2
Grand Total Number of Members	**3**	**2**	**3**	**8**	**3**	**2**	**3**	**8**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59			1							**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	192
60-64		
65-69		
70-74	1	107
75+		
Total	2	150

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	142
65-69		
70-74		
75-79	1	44
80-84		
85-89		
90-94		
95-99		
100+		
Total	2	93

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

North Clackamas County Water Commission/2835
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
North Clackamas County Water Commission/2835

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

North Clackamas County Water Commission -- #2835

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for North Clackamas County Water Commission to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to North Clackamas County Water Commission.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for North Clackamas County Water Commission

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	22.43%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(9.50%)	(9.50%)	(9.50%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.94%**	**0.00%**	**4.41%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**14.44%**	**0.43%**	**4.84%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 71%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	9.93%	9.93%
Minimum 2017-2019 Rate	6.93%	3.93%
Maximum 2017-2019 Rate	12.93%	15.93%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$207,219	$235,186	$27,967	88%	$347,628	8%
12/31/2010	246,229	297,902	51,673	83%	277,048	19%
12/31/2011	267,657	344,501	76,844	78%	232,626	33%
12/31/2012	324,353	435,475	111,122	74%	245,417	45%
12/31/2013	390,977	483,852	92,875	81%	242,904	38%
12/31/2014	434,442	612,972	178,530	71%	208,423	86%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

North Clackamas County Water Commission

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$178,530	$92,875
Allocated pooled OPSRP UAL	23,827	17,175
Side account	0	0
Net unfunded pension actuarial accrued liability	202,357	110,050
Combined valuation payroll	208,423	242,904
Net pension UAL as a percentage of payroll	97%	45%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,657	$3,362

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$46,754	$39,077
Tier 1/Tier 2 valuation payroll	208,423	242,904
Tier 1/Tier 2 pension normal cost rate	22.43%	16.09%
Tier 1/ Tier 2 Actuarial accrued liability	$612,972	$483,852
Actuarial asset value	434,442	390,977
Tier 1/Tier 2 Unfunded actuarial accrued liability	178,530	92,875
Tier 1/ Tier 2 Funded status	71%	81%
Combined valuation payroll	$208,423	$242,904
Tier 1/Tier 2 UAL as a percentage of payroll	86%	38%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(9.50%)	(6.16%)
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	208,423	242,904
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$85,818	$80,107
2. Employer reserves	348,624	310,870
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$434,442**	**$390,977**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$390,977
2.	Regular employer contributions	14,317
3.	Benefit payments and expense	0
4.	Adjustments [1]	(306)
5.	Interest credited	29,454
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$434,442**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	33,934	28,601
Tier 2 Police & Fire	0	0
Tier 2 General Service	12,820	10,476
Total	**$46,754**	**$39,077**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$40,146	$46,754	$6,608

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	331,356	260,631
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	253,337	199,650
▪ **Total Active Members**	**$584,693**	**$460,281**
Dormant Members	28,279	23,571
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$612,972**	**$483,852**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$537,339	$612,972	$75,633

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$612,972	$483,852
2. Actuarial value of assets	434,442	390,977
3. Unfunded accrued liability *(1. – 2.)*	178,530	92,875
4. Funded percentage *(2. ÷ 1.)*	71%	81%
5. Combined valuation payroll	$208,423	$242,904
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	86%	38%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$92,875	$6,722	$6,920	$93,073	$6,972
December 31, 2014	N/A	N/A	N/A	$85,457	$6,184
Total				**$178,530**	**$13,156**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$483,852
b. Normal cost at December 31, 2013	39,077
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	39,013
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	561,942
f. Change in actuarial accrued liability due to assumption, method, and plan changes	75,633
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	637,575
2. Actuarial accrued liability at December 31, 2014	612,972
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	24,603
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	390,977
b. Contributions for 2014[1]	14,317
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	30,856
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	436,150
5. Actuarial value of assets at December 31, 2014	434,442
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(1,708)
7. Total actuarial gain/(loss) *(3. + 6.)*	**$22,895**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$92,875**
2. Expected increase	32,917
3. Liability (gain)/loss	(24,603)
4. Asset (gain)/loss	1,708
5. Change due to changes in assumptions, methods, and plan provisions	75,633
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$178,530**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			**December 31, 2013**		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	33,934	115,974	29.26%	28,601	152,790	18.72%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	12,820	92,449	13.87%	10,476	90,114	11.63%
Total	**$46,754**	**$208,423**	**22.43%**	**$39,077**	**$242,904**	**16.09%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$178,530	$92,875
2. Next year's Tier 1/Tier 2 UAL payment	13,156	6,722
3. Combined valuation payroll	208,423	242,904
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	6.31%	2.77%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	22.43%	16.09%
b. Tier 1/Tier 2 UAL rate	6.31%	2.77%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	28.89%	19.01%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.93%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.93%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.99%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	71%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.93%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	12.93%
7. Advisory July 1, 2017 total pension rate, before adjustment	28.89%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(15.96%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	6.31%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(9.65%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	12.93%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	22.43%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	22.43%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.93%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	22.43%	16.09%
b. Tier 1/Tier 2 UAL rate	(9.65%)	(6.31%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	12.93%	9.93%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$115,974	$0	$115,974
Tier 2	92,449	0	92,449
Tier 1/Tier 2 valuation payroll	208,423	0	208,423
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$208,423**	**$0**	**$208,423**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	1	0	3	2	1	0	3
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	0	3	2	1	0	3
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	0	1	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	0	1	N/A	1
Dormant Members								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**3**	**2**	**0**	**5**	**3**	**2**	**0**	**5**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44					1					**1**
45-49										
50-54										
55-59				1			1			**2**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**3**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	264
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	264

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Northeast Oregon Housing Authority/2637
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Northeast Oregon Housing Authority/2637

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Northeast Oregon Housing Authority -- #2637

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Northeast Oregon Housing Authority to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Northeast Oregon Housing Authority.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Northeast Oregon Housing Authority

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	19.09%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(6.52%)	(6.52%)	(6.52%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.58%**	**2.59%**	**7.39%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**14.08%**	**3.02%**	**7.82%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 81%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	9.57%	9.57%
Minimum 2017-2019 Rate	6.57%	3.57%
Maximum 2017-2019 Rate	12.57%	15.57%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$2,762,649	$2,872,484	$109,835	96%	$784,113	14%
12/31/2010	3,078,550	3,121,528	42,978	99%	816,864	5%
12/31/2011	2,794,568	3,360,981	566,413	83%	683,194	83%
12/31/2012	3,107,972	3,364,806	256,834	92%	703,856	36%
12/31/2013	3,340,344	3,620,147	279,803	92%	727,538	38%
12/31/2014	3,341,768	4,103,295	761,527	81%	755,052	101%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Northeast Oregon Housing Authority

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$761,527	$279,803
Allocated pooled OPSRP UAL	86,319	51,441
Side account	0	0
Net unfunded pension actuarial accrued liability	847,846	331,244
Combined valuation payroll	755,052	727,538
Net pension UAL as a percentage of payroll	112%	46%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$6,002	$10,070

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$61,028	$60,696
Tier 1/Tier 2 valuation payroll	319,659	399,009
Tier 1/Tier 2 pension normal cost rate	19.09%	15.21%
Tier 1/ Tier 2 Actuarial accrued liability	$4,103,295	$3,620,147
Actuarial asset value	3,341,768	3,340,344
Tier 1/Tier 2 Unfunded actuarial accrued liability	761,527	279,803
Tier 1/ Tier 2 Funded status	81%	92%
Combined valuation payroll	$755,052	$727,538
Tier 1/Tier 2 UAL as a percentage of payroll	101%	38%
Tier 1/Tier 2 UAL rate	(6.52%)	(5.64%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	5	7
Tier 1/Tier 2 dormant members	7	7
Tier 1/Tier 2 retirees and beneficiaries	7	6

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	755,052	727,538
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$646,722	$711,137
2. Employer reserves	1,847,268	1,833,425
3. Benefits in force reserve	847,778	795,781
4. Total market value of assets ***(1. + 2. + 3.)***	**$3,341,768**	**$3,340,344**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$3,340,344
2.	Regular employer contributions	18,065
3.	Benefit payments and expense	(140,017)
4.	Adjustments [1]	(111,264)
5.	Interest credited	234,641
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,341,768**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	42,194	41,464
Tier 2 Police & Fire	0	0
Tier 2 General Service	18,834	19,232
Total	**$61,028**	**$60,696**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$51,936	$61,028	$9,092

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	1,197,090	1,159,478
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	336,748	344,540
▪ **Total Active Members**	**$1,533,838**	**$1,504,018**
Dormant Members	924,789	833,358
Retired Members and Beneficiaries	1,644,668	1,282,771
Total Actuarial Accrued Liability	**$4,103,295**	**$3,620,147**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$3,691,438	$4,103,295	$411,857

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$4,103,295	$3,620,147
2. Actuarial value of assets	3,341,768	3,340,344
3. Unfunded accrued liability *(1. – 2.)*	761,527	279,803
4. Funded percentage *(2. ÷ 1.)*	81%	92%
5. Combined valuation payroll	$755,052	$727,538
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	101%	38%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$279,803	$20,252	$20,849	$280,400	$21,004
December 31, 2014	N/A	N/A	N/A	$481,127	$34,814
Total				**$761,527**	**$55,818**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$3,620,147
b. Normal cost at December 31, 2013	60,696
c. Benefit payments during 2014	(138,938)
d. Interest at 7.75% to December 31, 2014	277,530
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	3,819,435
f. Change in actuarial accrued liability due to assumption, method, and plan changes	411,857
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	4,231,292
2. Actuarial accrued liability at December 31, 2014	4,103,295
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	127,997
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	3,340,344
b. Contributions for 2014[1]	18,065
c. Benefit payments and expenses during 2014	(140,017)
d. Interest at 7.75% to December 31, 2014	254,151
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	3,472,542
5. Actuarial value of assets at December 31, 2014	3,341,768
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(130,774)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($2,777)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$279,803**
2. Expected increase	67,090
3. Liability (gain)/loss	(127,997)
4. Asset (gain)/loss	130,774
5. Change due to changes in assumptions, methods, and plan provisions	411,857
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$761,527**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	42,194	184,659	22.85%	41,464	230,133	18.02%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	18,834	135,000	13.95%	19,232	168,876	11.39%
Total	**$61,028**	**$319,659**	**19.09%**	**$60,696**	**$399,009**	**15.21%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$761,527	$279,803
2. Next year's Tier 1/Tier 2 UAL payment	55,818	20,252
3. Combined valuation payroll	755,052	727,538
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	7.39%	2.78%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.09%	15.21%
b. Tier 1/Tier 2 UAL rate	7.39%	2.78%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	26.63%	18.14%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.57%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.57%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.91%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	81%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.57%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	12.57%
7. Advisory July 1, 2017 total pension rate, before adjustment	26.63%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(14.06%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	7.39%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(6.67%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	12.57%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	19.09%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	19.09%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.57%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.09%	15.21%
b. Tier 1/Tier 2 UAL rate	(6.67%)	(5.79%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	12.57%	9.57%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$184,659	$0	$184,659
Tier 2	135,000	0	135,000
Tier 1/Tier 2 valuation payroll	319,659	0	319,659
OPSRP valuation payroll	435,393	0	435,393
Combined valuation payroll	**$755,052**	**$0**	**$755,052**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	3	2	12	17	4	3	7	14
Police & Fire	0	0	0	0	0	0	0	0
Total	3	2	12	17	4	3	7	14
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	0	N/A	1	1	0	N/A	1
Dormant Members								
General Service	6	1	1	8	7	0	1	8
Police & Fire	0	0	0	0	0	0	0	0
Total	6	1	1	8	7	0	1	8
Retired Members and Beneficiaries								
General Service	6	1	0	7	5	1	0	6
Police & Fire	0	0	0	0	0	0	0	0
Total	6	1	0	7	5	1	0	6
Grand Total Number of Members	**16**	**4**	**13**	**33**	**17**	**4**	**8**	**29**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59			1							**1**
60-64				1		1				**2**
65-69					1	1				**2**
70-74										
75+										
Total	**0**	**0**	**1**	**1**	**1**	**2**	**0**	**0**	**0**	**5**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44	1	1,962
45-49		
50-54	3	282
55-59	1	1,439
60-64	2	1,781
65-69		
70-74		
75+		
Total	7	1,116

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	1,167
60-64	2	1,350
65-69	3	1,844
70-74		
75-79		
80-84	1	1,323
85-89		
90-94		
95-99		
100+		
Total	7	1,532

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Nyssa Road Assessment District #2/2550
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Nyssa Road Assessment District #2/2550

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Nyssa Road Assessment District #2 -- #2550

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Nyssa Road Assessment District #2 to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Nyssa Road Assessment District #2.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Nyssa Road Assessment District #2

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.73%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	21.64%	21.64%	21.64%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**40.38%**	**30.75%**	**35.55%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**40.88%**	**31.18%**	**35.98%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 70%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	33.32%	33.32%
Minimum 2017-2019 Rate	26.66%	20.00%
Maximum 2017-2019 Rate	39.98%	46.64%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$933,276	$1,702,643	$769,367	55%	$154,312	499%
12/31/2010	1,006,310	1,752,967	746,657	57%	158,434	471%
12/31/2011	1,003,416	1,782,911	779,495	56%	162,497	480%
12/31/2012	1,092,540	1,592,557	500,017	69%	171,200	292%
12/31/2013	1,250,536	1,638,254	387,718	76%	175,770	221%
12/31/2014	1,328,253	1,887,894	559,641	70%	193,031	290%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Nyssa Road Assessment District #2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$559,641	$387,718
Allocated pooled OPSRP UAL	22,068	12,428
Side account	0	0
Net unfunded pension actuarial accrued liability	581,709	400,146
Combined valuation payroll	193,031	175,770
Net pension UAL as a percentage of payroll	301%	228%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,534	$2,433

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$24,460	$20,485
Tier 1/Tier 2 valuation payroll	137,959	134,823
Tier 1/Tier 2 pension normal cost rate	17.73%	15.19%
Tier 1/ Tier 2 Actuarial accrued liability	$1,887,894	$1,638,254
Actuarial asset value	1,328,253	1,250,536
Tier 1/Tier 2 Unfunded actuarial accrued liability	559,641	387,718
Tier 1/ Tier 2 Funded status	70%	76%
Combined valuation payroll	$193,031	$175,770
Tier 1/Tier 2 UAL as a percentage of payroll	290%	221%
Tier 1/Tier 2 UAL rate	21.64%	18.13%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	3	3
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	7	7

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	193,031	175,770
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$278,676	$259,959
2. Employer reserves	441,920	337,732
3. Benefits in force reserve	607,656	652,846
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,328,253**	**$1,250,536**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$1,250,536
2.	Regular employer contributions	74,666
3.	Benefit payments and expense	(100,359)
4.	Adjustments [1]	12,881
5.	Interest credited	90,529
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,328,253**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	17,457	14,857
Tier 2 Police & Fire	0	0
Tier 2 General Service	7,003	5,628
Total	**$24,460**	**$20,485**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$21,150	$24,460	$3,310

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	545,636	454,946
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	40,878	26,419
▪ **Total Active Members**	**$586,514**	**$481,365**
Dormant Members	122,542	104,525
Retired Members and Beneficiaries	1,178,838	1,052,364
Total Actuarial Accrued Liability	**$1,887,894**	**$1,638,254**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,673,607	$1,887,894	$214,287

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$1,887,894	$1,638,254
2. Actuarial value of assets	1,328,253	1,250,536
3. Unfunded accrued liability *(1. – 2.)*	559,641	387,718
4. Funded percentage *(2. ÷ 1.)*	70%	76%
5. Combined valuation payroll	$193,031	$175,770
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	290%	221%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$387,718	$28,063	$28,890	$388,545	$29,104
December 31, 2014	N/A	N/A	N/A	$171,096	$12,380
Total				**$559,641**	**$41,484**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$1,638,254
b. Normal cost at December 31, 2013	20,485
c. Benefit payments during 2014	(99,586)
d. Interest at 7.75% to December 31, 2014	123,900
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,683,053
f. Change in actuarial accrued liability due to assumption, method, and plan changes	214,287
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	1,897,340
2. Actuarial accrued liability at December 31, 2014	1,887,894
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	9,446
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	1,250,536
b. Contributions for 2014[1]	74,666
c. Benefit payments and expenses during 2014	(100,359)
d. Interest at 7.75% to December 31, 2014	95,921
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	1,320,764
5. Actuarial value of assets at December 31, 2014	1,328,253
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	7,489
7. Total actuarial gain/(loss) *(3. + 6.)*	**$16,935**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$387,718**
2. Expected increase	(25,429)
3. Liability (gain)/loss	(9,446)
4. Asset (gain)/loss	(7,489)
5. Change due to changes in assumptions, methods, and plan provisions	214,287
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$559,641**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	17,457	81,835	21.33%	14,857	79,909	18.59%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	7,003	56,124	12.48%	5,628	54,914	10.25%
Total	**$24,460**	**$137,959**	**17.73%**	**$20,485**	**$134,823**	**15.19%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$559,641	$387,718
2. Next year's Tier 1/Tier 2 UAL payment	41,484	28,063
3. Combined valuation payroll	193,031	175,770
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	21.49%	15.97%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.73%	15.19%
b. Tier 1/Tier 2 UAL rate	21.49%	15.97%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	39.37%	31.31%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	33.32%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	33.32%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	6.66%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	6.66%
c. Funded percentage	70%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	6.66%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	26.66%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	39.98%
7. Advisory July 1, 2017 total pension rate, before adjustment	39.37%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	21.49%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	21.49%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	39.37%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.73%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.73%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	39.37%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.73%	15.19%
b. Tier 1/Tier 2 UAL rate	21.49%	17.98%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	39.37%	33.32%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$81,835	$0	$81,835
Tier 2	56,124	0	56,124
Tier 1/Tier 2 valuation payroll	137,959	0	137,959
OPSRP valuation payroll	55,072	0	55,072
Combined valuation payroll	**$193,031**	**$0**	**$193,031**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	1	2	5	2	1	1	4
Police & Fire	0	0	0	0	0	0	0	0
Total	2	1	2	5	2	1	1	4
Active Members with previous service segments with the employer								
General Service	1	0	N/A	1	1	0	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	0	N/A	1	1	0	N/A	1
Dormant Members								
General Service	1	0	1	2	1	0	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	0	1	2
Retired Members and Beneficiaries								
General Service	7	0	0	7	7	0	0	7
Police & Fire	0	0	0	0	0	0	0	0
Total	7	0	0	7	7	0	0	7
Grand Total Number of Members	**11**	**1**	**3**	**15**	**11**	**1**	**2**	**14**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54				1						**1**
55-59										
60-64					1	1				**2**
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**3**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	760
60-64		
65-69		
70-74		
75+		
Total	1	760

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	1,296
60-64	1	49
65-69		
70-74		
75-79	2	1,298
80-84	1	6,324
85-89	1	166
90-94	1	326
95-99		
100+		
Total	7	1,537

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Oak Lodge Sanitary District/2524
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Oak Lodge Sanitary District/2524

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Oak Lodge Sanitary District -- #2524

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Oak Lodge Sanitary District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oak Lodge Sanitary District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Oak Lodge Sanitary District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.84%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	2.44%	2.44%	2.44%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**16.29%**	**11.55%**	**16.35%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**16.79%**	**11.98%**	**16.78%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 79%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	12.28%	12.28%
Minimum 2017-2019 Rate	9.28%	6.28%
Maximum 2017-2019 Rate	15.28%	18.28%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$7,325,766	$8,320,974	$995,208	88%	$1,586,102	63%
12/31/2010	7,332,942	8,828,349	1,495,407	83%	1,520,200	98%
12/31/2011	7,106,323	9,259,870	2,153,547	77%	1,814,102	119%
12/31/2012	7,723,464	9,061,693	1,338,229	85%	1,870,816	72%
12/31/2013	8,219,096	9,066,220	847,124	91%	1,921,520	44%
12/31/2014	8,520,732	10,729,670	2,208,938	79%	2,014,729	110%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Oak Lodge Sanitary District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$2,208,938	$847,124
Allocated pooled OPSRP UAL	230,327	135,863
Side account	0	0
Net unfunded pension actuarial accrued liability	2,439,265	982,987
Combined valuation payroll	2,014,729	1,921,520
Net pension UAL as a percentage of payroll	121%	51%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$16,014	$26,596

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$149,589	$117,175
Tier 1/Tier 2 valuation payroll	1,164,956	1,058,466
Tier 1/Tier 2 pension normal cost rate	12.84%	11.07%
Tier 1/ Tier 2 Actuarial accrued liability	$10,729,670	$9,066,220
Actuarial asset value	8,520,732	8,219,096
Tier 1/Tier 2 Unfunded actuarial accrued liability	2,208,938	847,124
Tier 1/ Tier 2 Funded status	79%	91%
Combined valuation payroll	$2,014,729	$1,921,520
Tier 1/Tier 2 UAL as a percentage of payroll	110%	44%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	2.44%	1.21%
Tier 1/Tier 2 active members [1]	13	12
Tier 1/Tier 2 dormant members	5	4
Tier 1/Tier 2 retirees and beneficiaries	19	19

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2014**	**December 31, 2013**
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	2,014,729	1,921,520
3. Amortization factor	10.118	10.703
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$981,283	$916,101
2. Employer reserves	3,959,066	3,575,593
3. Benefits in force reserve	3,580,383	3,727,402
4. Total market value of assets ***(1. + 2. + 3.)***	**$8,520,732**	**$8,219,096**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$8,219,096
2.	Regular employer contributions	117,028
3.	Benefit payments and expense	(591,327)
4.	Adjustments [1]	197,681
5.	Interest credited	578,255
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$8,520,732**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	64,365	50,903
Tier 2 Police & Fire	0	0
Tier 2 General Service	85,224	66,272
Total	**$149,589**	**$117,175**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$127,619	$149,589	$21,970

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	1,269,534	1,009,683
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	1,376,659	1,107,206
▪ **Total Active Members**	**$2,646,193**	**$2,116,889**
Dormant Members	1,137,624	940,890
Retired Members and Beneficiaries	6,945,853	6,008,441
Total Actuarial Accrued Liability	**$10,729,670**	**$9,066,220**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$9,343,725	$10,729,670	$1,385,945

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$10,729,670	$9,066,220
2. Actuarial value of assets	8,520,732	8,219,096
3. Unfunded accrued liability *(1. – 2.)*	2,208,938	847,124
4. Funded percentage *(2. ÷ 1.)*	79%	91%
5. Combined valuation payroll	$2,014,729	$1,921,520
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	110%	44%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$847,124	$61,315	$63,122	$848,931	$63,590
December 31, 2014	N/A	N/A	N/A	$1,360,007	$98,409
Total				**$2,208,938**	**$161,999**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$9,066,220
b. Normal cost at December 31, 2013	117,175
c. Benefit payments during 2014	(586,772)
d. Interest at 7.75% to December 31, 2014	684,435
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	9,281,058
f. Change in actuarial accrued liability due to assumption, method, and plan changes	1,385,945
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	10,667,003
2. Actuarial accrued liability at December 31, 2014	10,729,670
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(62,667)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	8,219,096
b. Contributions for 2014[1]	117,028
c. Benefit payments and expenses during 2014	(591,327)
d. Interest at 7.75% to December 31, 2014	618,601
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	8,363,397
5. Actuarial value of assets at December 31, 2014	8,520,732
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	157,335
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$94,668**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$847,124**
2. Expected increase	70,537
3. Liability (gain)/loss	62,667
4. Asset (gain)/loss	(157,335)
5. Change due to changes in assumptions, methods, and plan provisions	1,385,945
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$2,208,938**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	64,365	445,172	14.46%	50,903	375,155	13.57%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	85,224	719,784	11.84%	66,272	683,311	9.70%
Total	**$149,589**	**$1,164,956**	**12.84%**	**$117,175**	**$1,058,466**	**11.07%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$2,208,938	$847,124
2. Next year's Tier 1/Tier 2 UAL payment	161,999	61,315
3. Combined valuation payroll	2,014,729	1,921,520
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	8.04%	3.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.84%	11.07%
b. Tier 1/Tier 2 UAL rate	8.04%	3.19%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	21.03%	14.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	12.28%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	12.28%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.46%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	79%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	9.28%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	15.28%
7. Advisory July 1, 2017 total pension rate, before adjustment	21.03%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(5.75%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	8.04%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	2.29%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	15.28%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.84%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.84%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	15.28%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.84%	11.07%
b. Tier 1/Tier 2 UAL rate	2.29%	1.06%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	15.28%	12.28%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$445,172	$0	$445,172
Tier 2	719,784	0	719,784
Tier 1/Tier 2 valuation payroll	1,164,956	0	1,164,956
OPSRP valuation payroll	849,773	0	849,773
Combined valuation payroll	**$2,014,729**	**$0**	**$2,014,729**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	4	9	11	24	4	8	12	24
Police & Fire	0	0	0	0	0	0	0	0
Total	4	9	11	24	4	8	12	24
Active Members with previous service segments with the employer								
General Service	7	2	N/A	9	7	3	N/A	10
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	7	2	N/A	9	7	3	N/A	10
Dormant Members								
General Service	4	1	1	6	4	0	0	4
Police & Fire	0	0	0	0	0	0	0	0
Total	4	1	1	6	4	0	0	4
Retired Members and Beneficiaries								
General Service	18	1	0	19	18	1	0	19
Police & Fire	0	0	0	0	0	0	0	0
Total	18	1	0	19	18	1	0	19
Grand Total Number of Members	**33**	**13**	**12**	**58**	**33**	**12**	**12**	**57**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39			1	1						**2**
40-44		2								**2**
45-49			2							**2**
50-54			2	1						**3**
55-59			1	1		1				**3**
60-64						1				**1**
65-69										
70-74										
75+										
Total	**0**	**2**	**6**	**3**	**0**	**2**	**0**	**0**	**0**	**13**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	1,081
50-54	2	2,680
55-59		
60-64	1	679
65-69	1	2,150
70-74		
75+		
Total	5	1,854

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	162
60-64	5	4,826
65-69	8	1,352
70-74	1	1,360
75-79	2	2,091
80-84	1	3,257
85-89	1	2,655
90-94		
95-99		
100+		
Total	19	2,451

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Oregon Community College Association/2685
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Oregon Community College Association/2685

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Oregon Community College Association -- #2685

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Oregon Community College Association to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oregon Community College Association.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Oregon Community College Association

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.88%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(3.41%)	(3.41%)	(3.41%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.48%**	**5.70%**	**10.50%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**9.98%**	**6.13%**	**10.93%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 113%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	5.47%	5.47%
Minimum 2017-2019 Rate	2.47%	0.00%
Maximum 2017-2019 Rate	8.47%	11.47%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$1,319,113	$1,244,519	($74,594)	106%	$333,806	(22%)
12/31/2010	1,448,455	1,302,346	(146,109)	111%	351,534	(42%)
12/31/2011	1,413,315	1,307,049	(106,266)	108%	361,227	(29%)
12/31/2012	1,581,197	1,310,878	(270,319)	121%	379,961	(71%)
12/31/2013	1,769,162	1,361,219	(407,943)	130%	373,823	(109%)
12/31/2014	1,843,244	1,631,176	(212,068)	113%	622,484	(34%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Oregon Community College Association

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	($212,068)	($407,943)
Allocated pooled OPSRP UAL	71,163	26,432
Side account	0	0
Net unfunded pension actuarial accrued liability	(140,905)	(381,511)
Combined valuation payroll	622,484	373,823
Net pension UAL as a percentage of payroll	(23%)	(102%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$4,948	$5,174

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	\$22,891	\$17,550
Tier 1/Tier 2 valuation payroll	192,688	170,161
Tier 1/Tier 2 pension normal cost rate	11.88%	13.22%
Tier 1/ Tier 2 Actuarial accrued liability	\$1,631,176	\$1,361,219
Actuarial asset value	1,843,244	1,769,162
Tier 1/Tier 2 Unfunded actuarial accrued liability	(212,068)	(407,943)
Tier 1/ Tier 2 Funded status	113%	130%
Combined valuation payroll	\$622,484	\$373,823
Tier 1/Tier 2 UAL as a percentage of payroll	(34%)	(109%)
Tier 1/Tier 2 UAL rate	(3.41%)	(7.75%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	1	2
Tier 1/Tier 2 retirees and beneficiaries	6	6

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	622,484	373,823
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$261,503	$245,592
2. Employer reserves	1,199,183	1,116,348
3. Benefits in force reserve	382,559	407,222
4. Total market value of assets *(1. + 2. + 3.)*	**$1,843,244**	**$1,769,162**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$1,769,162
2.	Regular employer contributions	2,059
3.	Benefit payments and expense	(63,182)
4.	Adjustments [1]	11,713
5.	Interest credited	123,493
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,843,244**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	22,891	17,550
Total	**$22,891**	**$17,550**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$19,250	$22,891	$3,641

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	243,097	212,255
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	609,751	423,533
▪ **Total Active Members**	**$852,848**	**$635,788**
Dormant Members	36,173	69,003
Retired Members and Beneficiaries	742,155	656,428
Total Actuarial Accrued Liability	**$1,631,176**	**$1,361,219**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,448,477	$1,631,176	$182,699

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$1,631,176	$1,361,219
2. Actuarial value of assets	1,843,244	1,769,162
3. Unfunded accrued liability *(1. – 2.)*	(212,068)	(407,943)
4. Funded percentage *(2. ÷ 1.)*	113%	130%
5. Combined valuation payroll	$622,484	$373,823
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(34%)	(109%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($407,943)	($29,527)	($30,397)	($408,813)	($30,623)
December 31, 2014	N/A	N/A	N/A	$196,745	$14,236
Total				**($212,068)**	**($16,387)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$1,361,219
b. Normal cost at December 31, 2013	17,550
c. Benefit payments during 2014	(62,696)
d. Interest at 7.75% to December 31, 2014	103,745
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,419,818
f. Change in actuarial accrued liability due to assumption, method, and plan changes	182,699
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	1,602,517
2. Actuarial accrued liability at December 31, 2014	1,631,176
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(28,659)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	1,769,162
b. Contributions for 2014[1]	2,059
c. Benefit payments and expenses during 2014	(63,182)
d. Interest at 7.75% to December 31, 2014	134,742
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	1,842,780
5. Actuarial value of assets at December 31, 2014	1,843,244
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	464
7. Total actuarial gain/(loss) *(3. + 6.)*	**($28,195)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($407,943)**
2. Expected increase	(15,019)
3. Liability (gain)/loss	28,659
4. Asset (gain)/loss	(464)
5. Change due to changes in assumptions, methods, and plan provisions	182,699
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**($212,068)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate	Normal Cost	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost Rate
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	22,891	192,688	11.88%	17,550	170,161	10.31%
Total	**$22,891**	**$192,688**	**11.88%**	**$17,550**	**$170,161**	**10.31%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	($212,068)	($407,943)
2. Next year's Tier 1/Tier 2 UAL payment	(16,387)	(29,527)
3. Combined valuation payroll	622,484	373,823
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(2.63%)	(7.90%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.88%	10.31%
b. Tier 1/Tier 2 UAL rate	(2.63%)	(7.90%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	9.40%	2.56%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.47%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.47%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.09%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	113%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.47%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	8.47%
7. Advisory July 1, 2017 total pension rate, before adjustment	9.40%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(0.93%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	(2.63%)
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(3.56%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	8.47%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.88%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.88%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.47%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.88%	13.22%
b. Tier 1/Tier 2 UAL rate	(3.56%)	(7.90%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	8.47%	5.47%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	192,688	0	192,688
Tier 1/Tier 2 valuation payroll	192,688	0	192,688
OPSRP valuation payroll	429,796	0	429,796
Combined valuation payroll	**$622,484**	**$0**	**$622,484**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	2	6	8	0	2	4	6
Police & Fire	0	0	0	0	0	0	0	0
Total	0	2	6	8	0	2	4	6
Active Members with previous service segments with the employer								
General Service	3	4	N/A	7	3	3	N/A	6
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	3	4	N/A	7	3	3	N/A	6
Dormant Members								
General Service	1	0	0	1	1	1	1	3
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	1	1	3
Retired Members and Beneficiaries								
General Service	6	0	1	7	6	0	0	6
Police & Fire	0	0	0	0	0	0	0	0
Total	6	0	1	7	6	0	0	6
Grand Total Number of Members	**10**	**6**	**7**	**23**	**10**	**6**	**5**	**21**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49				2						**2**
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54	1	313
55-59		
60-64		
65-69		
70-74		
75+		
Total	1	313

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	677
60-64	1	385
65-69	2	1,230
70-74		
75-79	1	1,021
80-84	1	531
85-89		
90-94		
95-99		
100+		
Total	6	846

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Oregon Municipal Electric Utilities Association/2876
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Oregon Municipal Electric Utilities Association/2876

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA	Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary	Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Oregon Municipal Electric Utilities Association -- #2876

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Oregon Municipal Electric Utilities Association to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oregon Municipal Electric Utilities Association.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Oregon Municipal Electric Utilities Association

	Payroll		
		OPSRP	
	Tier 1/Tier 2	**General Service**	**Police & Fire**
Pension			
Normal cost rate	12.06%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(0.34%)	(0.34%)	(0.34%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.73%**	**8.77%**	**13.57%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**13.23%**	**9.20%**	**14.00%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 123%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	9.81%	9.81%
Minimum 2017-2019 Rate	6.81%	3.81%
Maximum 2017-2019 Rate	12.81%	15.81%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$0	$0	$0	0%	$0	0%
12/31/2010	0	0	0	0%	0	0%
12/31/2011	0	0	0	0%	0	0%
12/31/2012	5,029	4,809	(220)	105%	92,028	0%
12/31/2013	18,644	14,353	(4,291)	130%	99,464	(4%)
12/31/2014	35,378	28,880	(6,498)	123%	97,533	(7%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Oregon Municipal Electric Utilities Association

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	($6,498)	($4,291)
Allocated pooled OPSRP UAL	11,150	7,033
Side account	0	0
Net unfunded pension actuarial accrued liability	4,652	2,742
Combined valuation payroll	97,533	99,464
Net pension UAL as a percentage of payroll	5%	3%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$775	$1,377

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$11,766	$9,918
Tier 1/Tier 2 valuation payroll	97,533	99,464
Tier 1/Tier 2 pension normal cost rate	12.06%	9.97%
Tier 1/ Tier 2 Actuarial accrued liability	$28,880	$14,353
Actuarial asset value	35,378	18,644
Tier 1/Tier 2 Unfunded actuarial accrued liability	(6,498)	(4,291)
Tier 1/ Tier 2 Funded status	123%	130%
Combined valuation payroll	$97,533	$99,464
Tier 1/Tier 2 UAL as a percentage of payroll	(7%)	(4%)
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(0.34%)	(0.16%)
Tier 1/Tier 2 active members[1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	0	0

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	97,533	99,464
3. Amortization factor	10.118	10.703
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$0	$0
2. Employer reserves	35,378	18,644
3. Benefits in force reserve	0	0
4. Total market value of assets ***(1. + 2. + 3.)***	**$35,378**	**$18,644**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$18,644
2. Regular employer contributions	14,425
3. Benefit payments and expense	0
4. Adjustments [1]	(92)
5. Interest credited	2,401
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$35,378**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	11,766	9,918
Total	**$11,766**	**$9,918**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Normal Cost	$9,925	$11,766	$1,841

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	0	0
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	28,880	14,353
▪ **Total Active Members**	**$28,880**	**$14,353**
Dormant Members	0	0
Retired Members and Beneficiaries	0	0
Total Actuarial Accrued Liability	**$28,880**	**$14,353**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$23,568	$28,880	$5,312

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$28,880	$14,353
2. Actuarial value of assets	35,378	18,644
3. Unfunded accrued liability *(1. – 2.)*	(6,498)	(4,291)
4. Funded percentage *(2. ÷ 1.)*	123%	130%
5. Combined valuation payroll	$97,533	$99,464
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(7%)	(4%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($4,291)	($311)	($320)	($4,300)	($322)
December 31, 2014	N/A	N/A	N/A	($2,198)	($159)
Total				**($6,498)**	**($481)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$14,353
b. Normal cost at December 31, 2013	9,918
c. Benefit payments during 2014	0
d. Interest at 7.75% to December 31, 2014	1,497
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	25,768
f. Change in actuarial accrued liability due to assumption, method, and plan changes	5,312
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	31,080
2. Actuarial accrued liability at December 31, 2014	28,880
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	2,200
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	18,644
b. Contributions for 2014[1]	14,425
c. Benefit payments and expenses during 2014	0
d. Interest at 7.75% to December 31, 2014	2,004
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	35,073
5. Actuarial value of assets at December 31, 2014	35,378
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	305
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$2,505**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($4,291)**
2. Expected increase	(5,014)
3. Liability (gain)/loss	(2,200)
4. Asset (gain)/loss	(305)
5. Change due to changes in assumptions, methods, and plan provisions	5,312
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**($6,498)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	11,766	97,533	12.06%	9,918	99,464	9.97%
Total	**$11,766**	**$97,533**	**12.06%**	**$9,918**	**$99,464**	**9.97%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	($6,498)	($4,291)
2. Next year's Tier 1/Tier 2 UAL payment	(481)	(311)
3. Combined valuation payroll	97,533	99,464
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.49%)	(0.31%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.06%	9.97%
b. Tier 1/Tier 2 UAL rate	(0.49%)	(0.31%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	11.72%	9.81%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.81%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.81%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.96%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	123%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.81%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	12.81%
7. Advisory July 1, 2017 total pension rate, before adjustment	11.72%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	0.00%
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	(0.49%)
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.49%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	11.72%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.06%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.06%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.72%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.06%	9.97%
b. Tier 1/Tier 2 UAL rate	(0.49%)	(0.31%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	11.72%	9.81%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	97,533	0	97,533
Tier 1/Tier 2 valuation payroll	97,533	0	97,533
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$97,533**	**$0**	**$97,533**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	0	1	0	1	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total Number of Members	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49				1						**1**
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total		

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Owyhee Irrigation District/2533
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Owyhee Irrigation District/2533

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Owyhee Irrigation District -- #2533

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Owyhee Irrigation District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Owyhee Irrigation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Owyhee Irrigation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.13%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	10.38%	10.38%	10.38%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**27.52%**	**19.49%**	**24.29%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**28.02%**	**19.92%**	**24.72%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 73%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	22.09%	22.09%
Minimum 2017-2019 Rate	17.67%	13.25%
Maximum 2017-2019 Rate	26.51%	30.93%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$5,363,864	$8,428,446	$3,064,582	64%	$1,172,351	261%
12/31/2010	5,822,565	8,742,967	2,920,402	67%	1,218,051	240%
12/31/2011	5,806,866	8,836,456	3,029,590	66%	1,230,438	246%
12/31/2012	6,153,054	8,361,630	2,208,576	74%	1,221,590	181%
12/31/2013	7,013,954	8,601,934	1,587,980	82%	1,350,553	118%
12/31/2014	6,932,463	9,470,845	2,538,382	73%	1,286,014	197%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Owyhee Irrigation District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$2,538,382	$1,587,980
Allocated pooled OPSRP UAL	147,019	95,492
Side account	0	0
Net unfunded pension actuarial accrued liability	2,685,401	1,683,472
Combined valuation payroll	1,286,014	1,350,553
Net pension UAL as a percentage of payroll	209%	125%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$10,222	$18,693

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$114,143	$103,326
Tier 1/Tier 2 valuation payroll	707,443	769,254
Tier 1/Tier 2 pension normal cost rate	16.13%	13.43%
Tier 1/ Tier 2 Actuarial accrued liability	$9,470,845	$8,601,934
Actuarial asset value	6,932,463	7,013,954
Tier 1/Tier 2 Unfunded actuarial accrued liability	2,538,382	1,587,980
Tier 1/ Tier 2 Funded status	73%	82%
Combined valuation payroll	$1,286,014	$1,350,553
Tier 1/Tier 2 UAL as a percentage of payroll	197%	118%
Tier 1/Tier 2 UAL rate	10.38%	8.66%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	15	16
Tier 1/Tier 2 dormant members	1	1
Tier 1/Tier 2 retirees and beneficiaries	27	27

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	1,286,014	1,350,553
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$956,412	$1,085,175
2. Employer reserves	2,690,870	2,421,219
3. Benefits in force reserve	3,285,182	3,507,560
4. Total market value of assets ***(1. + 2. + 3.)***	**$6,932,463**	**$7,013,954**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$7,013,954
2. Regular employer contributions	288,966
3. Benefit payments and expense	(542,572)
4. Adjustments [1]	(300,294)
5. Interest credited	472,409
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$6,932,463**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	78,211	74,850
Tier 2 Police & Fire	0	0
Tier 2 General Service	35,932	28,476
Total	**$114,143**	**$103,326**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$97,021	$114,143	$17,122

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	2,182,087	2,061,067
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	594,111	457,772
▪ **Total Active Members**	**$2,776,198**	**$2,518,839**
Dormant Members	321,476	429,031
Retired Members and Beneficiaries	6,373,171	5,654,064
Total Actuarial Accrued Liability	**$9,470,845**	**$8,601,934**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$8,350,550	$9,470,845	$1,120,295

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$9,470,845	$8,601,934
2. Actuarial value of assets	6,932,463	7,013,954
3. Unfunded accrued liability *(1. – 2.)*	2,538,382	1,587,980
4. Funded percentage *(2. ÷ 1.)*	73%	82%
5. Combined valuation payroll	$1,286,014	$1,350,553
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	197%	118%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$1,587,980	$114,938	$118,326	$1,591,368	$119,204
December 31, 2014	N/A	N/A	N/A	$947,014	$68,525
Total				**$2,538,382**	**$187,729**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$8,601,934
b. Normal cost at December 31, 2013	103,326
c. Benefit payments during 2014	(538,393)
d. Interest at 7.75% to December 31, 2014	649,791
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	8,816,658
f. Change in actuarial accrued liability due to assumption, method, and plan changes	1,120,295
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	9,936,953
2. Actuarial accrued liability at December 31, 2014	9,470,845
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	466,108
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	7,013,954
b. Contributions for 2014[1]	288,966
c. Benefit payments and expenses during 2014	(542,572)
d. Interest at 7.75% to December 31, 2014	533,754
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	7,294,102
5. Actuarial value of assets at December 31, 2014	6,932,463
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(361,639)
7. Total actuarial gain/(loss) *(3. + 6.)*	**$104,469**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$1,587,980**
2. Expected increase	(65,424)
3. Liability (gain)/loss	(466,108)
4. Asset (gain)/loss	361,639
5. Change due to changes in assumptions, methods, and plan provisions	1,120,295
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$2,538,382**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	78,211	442,748	17.66%	74,850	520,800	14.37%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	35,932	264,695	13.57%	28,476	248,454	11.46%
Total	**$114,143**	**$707,443**	**16.13%**	**$103,326**	**$769,254**	**13.43%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$2,538,382	$1,587,980
2. Next year's Tier 1/Tier 2 UAL payment	187,729	114,938
3. Combined valuation payroll	1,286,014	1,350,553
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	14.60%	8.51%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.13%	13.43%
b. Tier 1/Tier 2 UAL rate	14.60%	8.51%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	30.88%	22.09%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	22.09%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	22.09%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	4.42%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	4.42%
c. Funded percentage	73%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	4.42%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	17.67%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	26.51%
7. Advisory July 1, 2017 total pension rate, before adjustment	30.88%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(4.37%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	14.60%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	10.23%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	26.51%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.13%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.13%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	26.51%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.13%	13.43%
b. Tier 1/Tier 2 UAL rate	10.23%	8.51%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	26.51%	22.09%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$442,748	$0	$442,748
Tier 2	264,695	0	264,695
Tier 1/Tier 2 valuation payroll	707,443	0	707,443
OPSRP valuation payroll	578,571	0	578,571
Combined valuation payroll	**$1,286,014**	**$0**	**$1,286,014**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	10	5	15	30	11	5	16	32
Police & Fire	0	0	0	0	0	0	0	0
Total	10	5	15	30	11	5	16	32
Active Members with previous service segments with the employer								
General Service	3	1	N/A	4	3	1	N/A	4
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	3	1	N/A	4	3	1	N/A	4
Dormant Members								
General Service	1	0	1	2	1	0	1	2
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	0	1	2
Retired Members and Beneficiaries								
General Service	26	1	1	28	26	1	1	28
Police & Fire	0	0	0	0	0	0	0	0
Total	26	1	1	28	26	1	1	28
Grand Total Number of Members	**40**	**7**	**17**	**64**	**41**	**7**	**18**	**66**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1							**1**
45-49										
50-54				1	1	2				**4**
55-59			2	1	1	1				**5**
60-64					3	1				**4**
65-69			1							**1**
70-74										
75+										
Total	**0**	**0**	**4**	**2**	**5**	**4**	**0**	**0**	**0**	**15**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	1,964
60-64		
65-69		
70-74		
75+		
Total	1	1,964

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	2,706
60-64	2	2,630
65-69	7	2,043
70-74	3	3,022
75-79	7	666
80-84	5	1,336
85-89	1	819
90-94	1	280
95-99		
100+		
Total	27	1,621

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Polk County Fire District #1/2688
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Polk County Fire District #1/2688

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Polk County Fire District #1 -- #2688

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Polk County Fire District #1 to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk County Fire District #1.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Polk County Fire District #1

	Payroll		
		OPSRP	
	Tier 1/Tier 2	**General Service**	**Police & Fire**
Pension			
Normal cost rate	18.55%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	2.21%	2.21%	2.21%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**21.77%**	**11.32%**	**16.12%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**22.27%**	**11.75%**	**16.55%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 78%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	17.30%	17.30%
Minimum 2017-2019 Rate	13.84%	10.38%
Maximum 2017-2019 Rate	20.76%	24.22%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$2,498,792	$2,879,399	$380,607	87%	$1,023,760	37%
12/31/2010	2,752,119	3,185,564	433,445	86%	1,099,325	39%
12/31/2011	2,877,755	3,340,925	463,170	86%	1,112,055	42%
12/31/2012	3,362,223	3,697,465	335,242	91%	1,132,943	30%
12/31/2013	3,617,028	4,043,451	426,423	89%	924,111	46%
12/31/2014	3,853,496	4,937,704	1,084,208	78%	979,822	111%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Polk County Fire District #1

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$1,084,208	$426,423
Allocated pooled OPSRP UAL	112,015	65,340
Side account	0	0
Net unfunded pension actuarial accrued liability	1,196,223	491,763
Combined valuation payroll	979,822	924,111
Net pension UAL as a percentage of payroll	122%	53%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$7,788	$12,791

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$105,214	$82,484
Tier 1/Tier 2 valuation payroll	567,213	544,423
Tier 1/Tier 2 pension normal cost rate	18.55%	15.15%
Tier 1/ Tier 2 Actuarial accrued liability	$4,937,704	$4,043,451
Actuarial asset value	3,853,496	3,617,028
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,084,208	426,423
Tier 1/ Tier 2 Funded status	78%	89%
Combined valuation payroll	$979,822	$924,111
Tier 1/Tier 2 UAL as a percentage of payroll	111%	46%
Tier 1/Tier 2 UAL rate	2.21%	2.15%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	7	7
Tier 1/Tier 2 dormant members	6	5
Tier 1/Tier 2 retirees and beneficiaries	13	13

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	979,822	924,111
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$337,578	$316,944
2. Employer reserves	2,602,069	2,346,190
3. Benefits in force reserve	913,849	953,894
4. Total market value of assets *(1. + 2. + 3.)*	**$3,853,496**	**$3,617,028**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$3,617,028
2.	Regular employer contributions	80,364
3.	Benefit payments and expense	(150,929)
4.	Adjustments [1]	48,710
5.	Interest credited	258,323
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$3,853,496**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	95,219	74,474
Tier 2 General Service	9,995	8,010
Total	**$105,214**	**$82,484**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$86,127	$105,214	$19,087

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$756,048	$605,752
▪ Tier 1 General Service	261,454	200,474
▪ Tier 2 Police & Fire	1,383,363	1,029,259
▪ Tier 2 General Service	119,912	186,183
▪ **Total Active Members**	**$2,520,777**	**$2,021,668**
Dormant Members	644,081	484,139
Retired Members and Beneficiaries	1,772,846	1,537,644
Total Actuarial Accrued Liability	**$4,937,704**	**$4,043,451**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$4,292,379	$4,937,704	$645,325

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$4,937,704	$4,043,451
2. Actuarial value of assets	3,853,496	3,617,028
3. Unfunded accrued liability *(1. – 2.)*	1,084,208	426,423
4. Funded percentage *(2. ÷ 1.)*	78%	89%
5. Combined valuation payroll	$979,822	$924,111
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	111%	46%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$426,423	$30,864	$31,774	$427,333	$32,010
December 31, 2014	N/A	N/A	N/A	$656,875	$47,531
Total				**$1,084,208**	**$79,541**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$4,043,451
b. Normal cost at December 31, 2013	82,484
c. Benefit payments during 2014	(149,767)
d. Interest at 7.75% to December 31, 2014	310,760
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	4,286,928
f. Change in actuarial accrued liability due to assumption, method, and plan changes	645,325
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	4,932,253
2. Actuarial accrued liability at December 31, 2014	4,937,704
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(5,451)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	3,617,028
b. Contributions for 2014[1]	80,364
c. Benefit payments and expenses during 2014	(150,929)
d. Interest at 7.75% to December 31, 2014	277,585
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	3,824,048
5. Actuarial value of assets at December 31, 2014	3,853,496
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	29,448
7. Total actuarial gain/(loss) *(3. + 6.)*	**$23,997**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$426,423**
2. Expected increase	36,457
3. Liability (gain)/loss	5,451
4. Asset (gain)/loss	(29,448)
5. Change due to changes in assumptions, methods, and plan provisions	645,325
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$1,084,208**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	95,219	504,166	18.89%	74,474	482,068	15.45%
Tier 2 General Service	9,995	63,047	15.85%	8,010	62,355	12.85%
Total	**$105,214**	**$567,213**	**18.55%**	**$82,484**	**$544,423**	**15.15%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$1,084,208	$426,423
2. Next year's Tier 1/Tier 2 UAL payment	79,541	30,864
3. Combined valuation payroll	979,822	924,111
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	8.12%	3.34%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.55%	15.15%
b. Tier 1/Tier 2 UAL rate	8.12%	3.34%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	26.82%	18.64%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	17.30%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	17.30%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.46%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.46%
c. Funded percentage	78%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.46%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	13.84%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	20.76%
7. Advisory July 1, 2017 total pension rate, before adjustment	26.82%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(6.06%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	8.12%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	2.06%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	20.76%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	18.55%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	18.55%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	20.76%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	18.55%	15.15%
b. Tier 1/Tier 2 UAL rate	2.06%	2.00%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	20.76%	17.30%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	63,047	504,166	567,213
Tier 1/Tier 2 valuation payroll	63,047	504,166	567,213
OPSRP valuation payroll	36,149	376,460	412,609
Combined valuation payroll	**$99,196**	**$880,626**	**$979,822**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	1	1	2	0	1	1	2
Police & Fire	0	6	5	11	0	6	6	12
Total	0	7	6	13	0	7	7	14
Active Members with previous service segments with the employer								
General Service	7	2	N/A	9	7	3	N/A	10
Police & Fire	6	3	N/A	9	6	3	N/A	9
Total	13	5	N/A	18	13	6	N/A	19
Dormant Members								
General Service	0	1	0	1	0	0	0	0
Police & Fire	5	0	0	5	5	0	0	5
Total	5	1	0	6	5	0	0	5
Retired Members and Beneficiaries								
General Service	4	0	0	4	4	0	0	4
Police & Fire	9	0	1	10	9	0	1	10
Total	13	0	1	14	13	0	1	14
Grand Total Number of Members	**31**	**13**	**7**	**51**	**31**	**13**	**8**	**52**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39			2							2
40-44			1	1						2
45-49				1						1
50-54			1							1
55-59										
60-64			1							1
65-69										
70-74										
75+										
Total	0	0	5	2	0	0	0	0	0	7

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	1	95
50-54	1	2,532
55-59	2	427
60-64	1	193
65-69	1	536
70-74		
75+		
Total	6	702

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	45
60-64	6	978
65-69	6	686
70-74		
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	13	771

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Polk County/2037
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

November 2015
Polk County/2037

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Polk County/2037

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Polk County -- #2037

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Polk County to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk County.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Polk County

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	16.89%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	2.30%	2.30%	2.30%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**20.20%**	**11.41%**	**16.21%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**20.70%**	**11.84%**	**16.64%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 79%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	15.99%	15.99%
Minimum 2017-2019 Rate	12.79%	9.59%
Maximum 2017-2019 Rate	19.19%	22.39%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$55,947,719	$69,680,804	$13,733,085	80%	$13,126,561	105%
12/31/2010	59,956,853	72,381,493	12,424,640	83%	13,663,943	91%
12/31/2011	59,227,350	75,481,554	16,254,204	78%	14,950,846	109%
12/31/2012	64,520,822	76,733,759	12,212,937	84%	14,922,763	82%
12/31/2013	71,511,022	79,488,788	7,977,766	90%	14,698,729	54%
12/31/2014	73,270,515	92,628,817	19,358,302	79%	13,757,575	141%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Polk County

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$19,358,302	$7,977,766
Allocated pooled OPSRP UAL	1,572,790	1,039,290
Side account	0	0
Net unfunded pension actuarial accrued liability	20,931,092	9,017,056
Combined valuation payroll	13,757,575	14,698,729
Net pension UAL as a percentage of payroll	152%	61%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$109,353	$203,446

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$1,199,284	$1,148,518
Tier 1/Tier 2 valuation payroll	7,100,670	8,052,105
Tier 1/Tier 2 pension normal cost rate	16.89%	14.26%
Tier 1/ Tier 2 Actuarial accrued liability	$92,628,817	$79,488,788
Actuarial asset value	73,270,515	71,511,022
Tier 1/Tier 2 Unfunded actuarial accrued liability	19,358,302	7,977,766
Tier 1/ Tier 2 Funded status	79%	90%
Combined valuation payroll	$13,757,575	$14,698,729
Tier 1/Tier 2 UAL as a percentage of payroll	141%	54%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	2.30%	1.73%
Tier 1/Tier 2 active members [1]	108	127
Tier 1/Tier 2 dormant members	103	100
Tier 1/Tier 2 retirees and beneficiaries	384	372

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	13,757,575	14,698,729
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$10,618,718	$10,642,046
2. Employer reserves	34,887,280	32,952,593
3. Benefits in force reserve	27,764,517	27,916,383
4. Total market value of assets ***(1. + 2. + 3.)***	**$73,270,515**	**$71,511,022**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$71,511,022
2.	Regular employer contributions	1,096,929
3.	Benefit payments and expense	(4,585,517)
4.	Adjustments [1]	231,011
5.	Interest credited	5,017,069
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$73,270,515**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$190,558	$183,070
Tier 1 General Service	323,291	318,664
Tier 2 Police & Fire	342,304	326,338
Tier 2 General Service	343,131	320,446
Total	**$1,199,284**	**$1,148,518**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$1,000,211	$1,199,284	$199,073

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$4,728,564	$4,405,627
▪ Tier 1 General Service	13,997,831	12,803,220
▪ Tier 2 Police & Fire	5,814,299	5,095,391
▪ Tier 2 General Service	8,272,268	7,436,885
▪ **Total Active Members**	**$32,812,962**	**$29,741,123**
Dormant Members	5,953,380	4,747,437
Retired Members and Beneficiaries	53,862,475	45,000,228
Total Actuarial Accrued Liability	**$92,628,817**	**$79,488,788**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$81,760,254	$92,628,817	$10,868,563

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$92,628,817	$79,488,788
2. Actuarial value of assets	73,270,515	71,511,022
3. Unfunded accrued liability *(1. – 2.)*	19,358,302	7,977,766
4. Funded percentage *(2. ÷ 1.)*	79%	90%
5. Combined valuation payroll	$13,757,575	$14,698,729
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	141%	54%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$7,977,766	$577,430	$594,452	$7,994,788	$598,861
December 31, 2014	N/A	N/A	N/A	$11,363,514	$822,251
Total				**$19,358,302**	**$1,421,112**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$79,488,788
b. Normal cost at December 31, 2013	1,148,518
c. Benefit payments during 2014	(4,550,199)
d. Interest at 7.75% to December 31, 2014	6,028,566
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	82,115,673
f. Change in actuarial accrued liability due to assumption, method, and plan changes	10,868,563
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	92,984,236
2. Actuarial accrued liability at December 31, 2014	92,628,817
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	355,419
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	71,511,022
b. Contributions for 2014[1]	1,096,929
c. Benefit payments and expenses during 2014	(4,585,517)
d. Interest at 7.75% to December 31, 2014	5,406,921
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	73,429,356
5. Actuarial value of assets at December 31, 2014	73,270,515
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(158,841)
7. Total actuarial gain/(loss) *(3. + 6.)*	**$196,578**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$7,977,766**
2. Expected increase	708,551
3. Liability (gain)/loss	(355,419)
4. Asset (gain)/loss	158,841
5. Change due to changes in assumptions, methods, and plan provisions	10,868,563
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$19,358,302**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$190,558	$809,958	23.53%	$183,070	$956,661	19.14%
Tier 1 General Service	323,291	1,785,731	18.10%	318,664	2,042,119	15.60%
Tier 2 Police & Fire	342,304	1,762,727	19.42%	326,338	2,027,056	16.10%
Tier 2 General Service	343,131	2,742,254	12.51%	320,446	3,026,269	10.59%
Total	**$1,199,284**	**$7,100,670**	**16.89%**	**$1,148,518**	**$8,052,105**	**14.26%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$19,358,302	$7,977,766
2. Next year's Tier 1/Tier 2 UAL payment	1,421,112	577,430
3. Combined valuation payroll	13,757,575	14,698,729
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	10.33%	3.93%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.89%	14.26%
b. Tier 1/Tier 2 UAL rate	10.33%	3.93%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	27.37%	18.34%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	15.99%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	15.99%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.20%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.20%
c. Funded percentage	79%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.20%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	12.79%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	19.19%
7. Advisory July 1, 2017 total pension rate, before adjustment	27.37%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(8.18%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	10.33%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	2.15%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	19.19%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	16.89%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	16.89%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	19.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	16.89%	14.26%
b. Tier 1/Tier 2 UAL rate	2.15%	1.58%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	19.19%	15.99%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$1,785,731	$809,958	$2,595,689
Tier 2	2,742,254	1,762,727	4,504,981
Tier 1/Tier 2 valuation payroll	4,527,985	2,572,685	7,100,670
OPSRP valuation payroll	6,042,539	614,366	6,656,905
Combined valuation payroll	**$10,570,524**	**$3,187,051**	**$13,757,575**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	28	48	121	197	34	54	122	210
Police & Fire	9	23	10	42	12	27	13	52
Total	37	71	131	239	46	81	135	262
Active Members with previous service segments with the employer								
General Service	79	57	N/A	136	79	55	N/A	134
Police & Fire	11	16	N/A	27	12	15	N/A	27
Total	90	73	N/A	163	91	70	N/A	161
Dormant Members								
General Service	41	49	22	112	46	45	15	106
Police & Fire	6	7	3	16	5	4	1	10
Total	47	56	25	128	51	49	16	116
Retired Members and Beneficiaries								
General Service	312	16	0	328	304	15	1	320
Police & Fire	54	2	0	56	52	1	0	53
Total	366	18	0	384	356	16	1	373
Grand Total Number of Members	**540**	**218**	**156**	**914**	**544**	**216**	**152**	**912**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34		1	1							**2**
35-39		1	11	1						**13**
40-44			7	9	1					**17**
45-49			7	8	3					**18**
50-54			7	10	2	5				**24**
55-59			7	4	2	4				**17**
60-64			4	3	3	3	2			**15**
65-69				1	1					**2**
70-74										
75+										
Total	**0**	**2**	**44**	**36**	**12**	**12**	**2**	**0**	**0**	**108**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	12	580
40-44	17	453
45-49	16	945
50-54	13	720
55-59	20	1,394
60-64	14	367
65-69	8	243
70-74	2	424
75+	1	10
Total	103	728

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45	3	40
45-49	4	1,218
50-54	4	1,166
55-59	25	904
60-64	73	952
65-69	99	1,052
70-74	65	978
75-79	53	1,011
80-84	30	772
85-89	21	651
90-94	6	729
95-99	1	755
100+		
Total	384	950

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Polk Soil & Water Conservation District/2613
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

November 2015
Polk Soil & Water Conservation District/2613

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Polk Soil & Water Conservation District/2613

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No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Polk Soil & Water Conservation District -- #2613

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Polk Soil & Water Conservation District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk Soil & Water Conservation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Polk Soil & Water Conservation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	17.01%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(0.50%)	(0.50%)	(0.50%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**17.52%**	**8.61%**	**13.41%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.02%**	**9.04%**	**13.84%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 81%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	13.51%	13.51%
Minimum 2017-2019 Rate	10.51%	7.51%
Maximum 2017-2019 Rate	16.51%	19.51%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$286,697	$389,879	$103,182	74%	$296,506	35%
12/31/2010	295,692	404,871	109,179	73%	207,679	53%
12/31/2011	287,707	412,046	124,339	70%	188,085	66%
12/31/2012	322,307	440,320	118,013	73%	218,163	54%
12/31/2013	360,579	392,394	31,815	92%	198,395	16%
12/31/2014	365,179	451,078	85,899	81%	190,563	45%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Polk Soil & Water Conservation District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$85,899	$31,815
Allocated pooled OPSRP UAL	21,785	14,028
Side account	0	0
Net unfunded pension actuarial accrued liability	107,684	45,843
Combined valuation payroll	190,563	198,395
Net pension UAL as a percentage of payroll	57%	23%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,515	$2,746

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$0	$4,503
Tier 1/Tier 2 valuation payroll	0	32,450
Tier 1/Tier 2 pension normal cost rate	17.01%	13.88%
Tier 1/ Tier 2 Actuarial accrued liability	$451,078	$392,394
Actuarial asset value	365,179	360,579
Tier 1/Tier 2 Unfunded actuarial accrued liability	85,899	31,815
Tier 1/ Tier 2 Funded status	81%	92%
Combined valuation payroll	$190,563	$198,395
Tier 1/Tier 2 UAL as a percentage of payroll	45%	16%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(0.50%)	(0.37%)
Tier 1/Tier 2 active members[1]	0	1
Tier 1/Tier 2 dormant members	2	1
Tier 1/Tier 2 retirees and beneficiaries	1	1

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	190,563	198,395
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$51,282	$47,863
2. Employer reserves	162,763	149,856
3. Benefits in force reserve	151,134	162,861
4. Total market value of assets ***(1. + 2. + 3.)***	**$365,179**	**$360,579**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

	December 31, 2013 to December 31, 2014
1. Market value of assets at beginning of year	$360,579
2. Regular employer contributions	2,069
3. Benefit payments and expense	(24,961)
4. Adjustments [1]	2,666
5. Interest credited	24,826
6. Total transferred from side accounts	0
7. Market value of assets at end of year ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$365,179**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	4,503
Total	**$0**	**$4,503**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$0	$0	$0

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	48,698	44,493
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	11,987	81,965
▪ **Total Active Members**	**$60,685**	**$126,458**
Dormant Members	97,198	3,410
Retired Members and Beneficiaries	293,195	262,526
Total Actuarial Accrued Liability	**$451,078**	**$392,394**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$404,704	$451,078	$46,374

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$451,078	$392,394
2. Actuarial value of assets	365,179	360,579
3. Unfunded accrued liability *(1. – 2.)*	85,899	31,815
4. Funded percentage *(2. ÷ 1.)*	81%	92%
5. Combined valuation payroll	$190,563	$198,395
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	45%	16%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$31,815	$2,303	$2,371	$31,883	$2,388
December 31, 2014	N/A	N/A	N/A	$54,016	$3,909
Total				**$85,899**	**$6,297**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$392,394
b. Normal cost at December 31, 2013	4,503
c. Benefit payments during 2014	(24,769)
d. Interest at 7.75% to December 31, 2014	29,625
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	401,753
f. Change in actuarial accrued liability due to assumption, method, and plan changes	46,374
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	448,127
2. Actuarial accrued liability at December 31, 2014	451,078
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(2,951)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	360,579
b. Contributions for 2014[1]	2,069
c. Benefit payments and expenses during 2014	(24,961)
d. Interest at 7.75% to December 31, 2014	27,058
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	364,745
5. Actuarial value of assets at December 31, 2014	365,179
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	434
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($2,517)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$31,815**
2. Expected increase	5,193
3. Liability (gain)/loss	2,951
4. Asset (gain)/loss	(434)
5. Change due to changes in assumptions, methods, and plan provisions	46,374
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$85,899**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	4,503	32,450	13.88%
Total	**$0**	**$0**	**17.01%**	**$4,503**	**$32,450**	**13.88%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$85,899	$31,815
2. Next year's Tier 1/Tier 2 UAL payment	6,297	2,303
3. Combined valuation payroll	190,563	198,395
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.30%	1.16%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.01%	13.88%
b. Tier 1/Tier 2 UAL rate	3.30%	1.16%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	20.46%	15.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	13.51%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	13.51%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.70%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	81%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	10.51%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	16.51%
7. Advisory July 1, 2017 total pension rate, before adjustment	20.46%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(3.95%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	3.30%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(0.65%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	16.51%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	17.01%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	17.01%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	16.51%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	17.01%	13.88%
b. Tier 1/Tier 2 UAL rate	(0.65%)	(0.52%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	16.51%	13.51%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	0	0	0
OPSRP valuation payroll	190,563	0	190,563
Combined valuation payroll	**$190,563**	**$0**	**$190,563**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	0	6	6	0	1	5	6
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	6	6	0	1	5	6
Active Members with previous service segments with the employer								
General Service	1	2	N/A	3	1	2	N/A	3
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	1	2	N/A	3	1	2	N/A	3
Dormant Members								
General Service	0	2	3	5	0	1	2	3
Police & Fire	0	0	0	0	0	0	0	0
Total	0	2	3	5	0	1	2	3
Retired Members and Beneficiaries								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Grand Total Number of Members	**2**	**4**	**9**	**15**	**2**	**4**	**7**	**13**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64										
65-69										
70-74										
75+										
Total	0	0	0	0	0	0	0	0	0	0

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	138
40-44		
45-49	1	1,229
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total	2	684

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74	1	2,076
75-79		
80-84		
85-89		
90-94		
95-99		
100+		
Total	1	2,076

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Port of Astoria/2507
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Port of Astoria/2507

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of Astoria -- #2507

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Port of Astoria to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Astoria.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Port of Astoria

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	11.80%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	1.44%	1.44%	1.44%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**14.25%**	**10.55%**	**15.35%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**14.75%**	**10.98%**	**15.78%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 88%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	10.24%	10.24%
Minimum 2017-2019 Rate	7.24%	4.24%
Maximum 2017-2019 Rate	13.24%	16.24%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$4,374,426	$5,245,303	$870,877	83%	$885,928	98%
12/31/2010	4,723,404	5,478,397	754,993	86%	1,217,796	62%
12/31/2011	4,672,295	5,646,482	974,187	83%	1,358,257	72%
12/31/2012	5,195,703	5,444,429	248,726	95%	1,487,753	17%
12/31/2013	5,438,787	5,486,807	48,020	99%	1,294,017	4%
12/31/2014	5,452,817	6,228,155	775,338	88%	1,418,154	55%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Astoria

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$775,338	$48,020
Allocated pooled OPSRP UAL	162,126	91,495
Side account	0	0
Net unfunded pension actuarial accrued liability	937,464	139,515
Combined valuation payroll	1,418,154	1,294,017
Net pension UAL as a percentage of payroll	66%	11%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$11,272	$17,911

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$31,041	$25,641
Tier 1/Tier 2 valuation payroll	263,074	261,020
Tier 1/Tier 2 pension normal cost rate	11.80%	9.82%
Tier 1/ Tier 2 Actuarial accrued liability	$6,228,155	$5,486,807
Actuarial asset value	5,452,817	5,438,787
Tier 1/Tier 2 Unfunded actuarial accrued liability	775,338	48,020
Tier 1/ Tier 2 Funded status	88%	99%
Combined valuation payroll	$1,418,154	$1,294,017
Tier 1/Tier 2 UAL as a percentage of payroll	55%	4%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	1.44%	0.42%
Tier 1/Tier 2 active members [1]	4	4
Tier 1/Tier 2 dormant members	3	4
Tier 1/Tier 2 retirees and beneficiaries	31	31

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	1,418,154	1,294,017
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$329,525	$309,628
2. Employer reserves	2,529,895	2,361,474
3. Benefits in force reserve	2,593,398	2,767,685
4. Total market value of assets *(1. + 2. + 3.)*	**$5,452,817**	**$5,438,787**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$5,438,787
2.	Regular employer contributions	52,877
3.	Benefit payments and expense	(428,319)
4.	Adjustments [1]	20,392
5.	Interest credited	369,080
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)***	**$5,452,817**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	31,041	25,641
Total	**$31,041**	**$25,641**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$26,331	$31,041	$4,710

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	497,571	414,404
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	538,112	429,031
▪ **Total Active Members**	**$1,035,683**	**$843,435**
Dormant Members	161,345	181,961
Retired Members and Beneficiaries	5,031,127	4,461,411
Total Actuarial Accrued Liability	**$6,228,155**	**$5,486,807**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$5,491,756	$6,228,155	$736,399

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$6,228,155	$5,486,807
2. Actuarial value of assets	5,452,817	5,438,787
3. Unfunded accrued liability *(1. – 2.)*	775,338	48,020
4. Funded percentage *(2. ÷ 1.)*	88%	99%
5. Combined valuation payroll	$1,418,154	$1,294,017
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	55%	4%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$48,020	$3,476	$3,578	$48,122	$3,605
December 31, 2014	N/A	N/A	N/A	$727,216	$52,621
Total				**$775,338**	**$56,226**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$5,486,807
b. Normal cost at December 31, 2013	25,641
c. Benefit payments during 2014	(425,020)
d. Interest at 7.75% to December 31, 2014	409,752
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	5,497,180
f. Change in actuarial accrued liability due to assumption, method, and plan changes	736,399
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	6,233,579
2. Actuarial accrued liability at December 31, 2014	6,228,155
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	5,424
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	5,438,787
b. Contributions for 2014[1]	52,877
c. Benefit payments and expenses during 2014	(428,319)
d. Interest at 7.75% to December 31, 2014	406,958
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	5,470,303
5. Actuarial value of assets at December 31, 2014	5,452,817
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(17,486)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($12,062)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$48,020**
2. Expected increase	(21,143)
3. Liability (gain)/loss	(5,424)
4. Asset (gain)/loss	17,486
5. Change due to changes in assumptions, methods, and plan provisions	736,399
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$775,338**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	31,041	263,074	11.80%	25,641	261,020	9.82%
Total	**$31,041**	**$263,074**	**11.80%**	**$25,641**	**$261,020**	**9.82%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$775,338	$48,020
2. Next year's Tier 1/Tier 2 UAL payment	56,226	3,476
3. Combined valuation payroll	1,418,154	1,294,017
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.96%	0.27%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.80%	9.82%
b. Tier 1/Tier 2 UAL rate	3.96%	0.27%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.91%	10.24%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	10.24%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	10.24%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.05%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	88%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	7.24%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	13.24%
7. Advisory July 1, 2017 total pension rate, before adjustment	15.91%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.67%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	3.96%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.29%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	13.24%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	11.80%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	11.80%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	13.24%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	11.80%	9.82%
b. Tier 1/Tier 2 UAL rate	1.29%	0.27%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	13.24%	10.24%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	263,074	0	263,074
Tier 1/Tier 2 valuation payroll	263,074	0	263,074
OPSRP valuation payroll	1,155,080	0	1,155,080
Combined valuation payroll	**$1,418,154**	**$0**	**$1,418,154**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	4	25	29	0	4	23	27
Police & Fire	0	0	0	0	0	0	0	0
Total	0	4	25	29	0	4	23	27
Active Members with previous service segments with the employer								
General Service	4	1	N/A	5	5	0	N/A	5
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	4	1	N/A	5	5	0	N/A	5
Dormant Members								
General Service	1	2	5	8	1	3	3	7
Police & Fire	0	0	0	0	0	0	0	0
Total	1	2	5	8	1	3	3	7
Retired Members and Beneficiaries								
General Service	26	3	0	29	26	3	0	29
Police & Fire	2	0	0	2	2	0	0	2
Total	28	3	0	31	28	3	0	31
Grand Total Number of Members	**33**	**10**	**30**	**73**	**34**	**10**	**26**	**70**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1							**1**
45-49			1							**1**
50-54										
55-59			1							**1**
60-64				1						**1**
65-69										
70-74										
75+										
Total	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**4**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	1	636
60-64	2	515
65-69		
70-74		
75+		
Total	3	555

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54	1	40
55-59	2	2,958
60-64	6	1,090
65-69	8	399
70-74	8	1,412
75-79	3	807
80-84	1	2,577
85-89		
90-94	1	1,546
95-99	1	859
100+		
Total	31	1,109

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members’ regular account balances starting in 2015. 7.50% compounded annually on members’ variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Port of Cascade Locks/2633
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Port of Cascade Locks/2633

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No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of Cascade Locks -- #2633

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Port of Cascade Locks to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Cascade Locks.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Port of Cascade Locks

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.87%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(5.12%)	(5.12%)	(5.12%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**9.76%**	**3.99%**	**8.79%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**10.26%**	**4.42%**	**9.22%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 95%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	5.75%	5.75%
Minimum 2017-2019 Rate	2.75%	0.00%
Maximum 2017-2019 Rate	8.75%	11.75%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$5,074,370	$5,123,060	$48,690	99%	$547,818	9%
12/31/2010	5,420,488	5,350,182	(70,306)	101%	593,226	(12%)
12/31/2011	5,389,060	5,535,473	146,413	97%	627,202	23%
12/31/2012	5,740,612	5,705,510	(35,102)	101%	427,714	(8%)
12/31/2013	6,273,515	5,803,343	(470,172)	108%	447,857	(105%)
12/31/2014	6,314,643	6,629,236	314,593	95%	387,075	81%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Cascade Locks

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$314,593	($470,172)
Allocated pooled OPSRP UAL	44,251	31,666
Side account	0	0
Net unfunded pension actuarial accrued liability	358,844	(438,506)
Combined valuation payroll	387,075	447,857
Net pension UAL as a percentage of payroll	93%	(98%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,077	$6,199

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$17,230	$20,699
Tier 1/Tier 2 valuation payroll	124,255	177,812
Tier 1/Tier 2 pension normal cost rate	13.87%	11.64%
Tier 1/ Tier 2 Actuarial accrued liability	$6,629,236	$5,803,343
Actuarial asset value	6,314,643	6,273,515
Tier 1/Tier 2 Unfunded actuarial accrued liability	314,593	(470,172)
Tier 1/ Tier 2 Funded status	95%	108%
Combined valuation payroll	$387,075	$447,857
Tier 1/Tier 2 UAL as a percentage of payroll	81%	(105%)
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	(5.12%)	(5.89%)
Tier 1/Tier 2 active members [1]	3	4
Tier 1/Tier 2 dormant members	12	14
Tier 1/Tier 2 retirees and beneficiaries	33	31

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	387,075	447,857
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$859,023	$860,289
2. Employer reserves	3,218,879	3,274,563
3. Benefits in force reserve	2,236,742	2,138,663
4. Total market value of assets ***(1. + 2. + 3.)***	**$6,314,643**	**$6,273,515**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$6,273,515
2.	Regular employer contributions	(88)
3.	Benefit payments and expense	(369,414)
4.	Adjustments [1]	(32,088)
5.	Interest credited	442,719
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$6,314,643**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	0	0
Tier 2 Police & Fire	0	0
Tier 2 General Service	17,230	20,699
Total	**$17,230**	**$20,699**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$14,299	$17,230	$2,931

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	342,907	298,752
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	337,720	398,366
▪ **Total Active Members**	**$680,627**	**$697,118**
Dormant Members	1,609,386	1,658,775
Retired Members and Beneficiaries	4,339,223	3,447,450
Total Actuarial Accrued Liability	**$6,629,236**	**$5,803,343**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$5,860,546	$6,629,236	$768,690

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$6,629,236	$5,803,343
2. Actuarial value of assets	6,314,643	6,273,515
3. Unfunded accrued liability *(1. – 2.)*	314,593	(470,172)
4. Funded percentage *(2. ÷ 1.)*	95%	108%
5. Combined valuation payroll	$387,075	$447,857
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	81%	(105%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($470,172)	($34,031)	($35,034)	($471,175)	($35,294)
December 31, 2014	N/A	N/A	N/A	$785,768	$56,857
Total				**$314,593**	**$21,563**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$5,803,343
b. Normal cost at December 31, 2013	20,699
c. Benefit payments during 2014	(366,569)
d. Interest at 7.75% to December 31, 2014	436,357
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	5,893,830
f. Change in actuarial accrued liability due to assumption, method, and plan changes	768,690
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	6,662,520
2. Actuarial accrued liability at December 31, 2014	6,629,236
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	33,284
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	6,273,515
b. Contributions for 2014[1]	(88)
c. Benefit payments and expenses during 2014	(369,414)
d. Interest at 7.75% to December 31, 2014	471,879
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	6,375,892
5. Actuarial value of assets at December 31, 2014	6,314,643
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(61,248)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($27,964)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($470,172)**
2. Expected increase	(11,889)
3. Liability (gain)/loss	(33,284)
4. Asset (gain)/loss	61,248
5. Change due to changes in assumptions, methods, and plan provisions	768,690
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$314,593**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	0	0	0.00%	0	0	0.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	17,230	124,255	13.87%	20,699	177,812	11.64%
Total	**$17,230**	**$124,255**	**13.87%**	**$20,699**	**$177,812**	**11.64%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$314,593	($470,172)
2. Next year's Tier 1/Tier 2 UAL payment	21,563	(34,031)
3. Combined valuation payroll	387,075	447,857
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	5.57%	(7.60%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.87%	11.64%
b. Tier 1/Tier 2 UAL rate	5.57%	(7.60%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	19.59%	4.19%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	5.75%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	5.75%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.15%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	95%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	2.75%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	8.75%
7. Advisory July 1, 2017 total pension rate, before adjustment	19.59%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(10.84%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	5.57%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(5.27%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	8.75%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.87%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.87%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	8.75%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.87%	11.64%
b. Tier 1/Tier 2 UAL rate	(5.27%)	(6.04%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	8.75%	5.75%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$0	$0	$0
Tier 2	124,255	0	124,255
Tier 1/Tier 2 valuation payroll	124,255	0	124,255
OPSRP valuation payroll	262,820	0	262,820
Combined valuation payroll	**$387,075**	**$0**	**$387,075**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	0	3	8	11	0	4	9	13
Police & Fire	0	0	0	0	0	0	0	0
Total	0	3	8	11	0	4	9	13
Active Members with previous service segments with the employer								
General Service	2	1	N/A	3	2	1	N/A	3
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	2	1	N/A	3	2	1	N/A	3
Dormant Members								
General Service	8	4	2	14	9	5	0	14
Police & Fire	0	0	0	0	0	0	0	0
Total	8	4	2	14	9	5	0	14
Retired Members and Beneficiaries								
General Service	29	4	2	35	29	2	2	33
Police & Fire	0	0	0	0	0	0	0	0
Total	29	4	2	35	29	2	2	33
Grand Total Number of Members	**39**	**12**	**12**	**63**	**40**	**12**	**11**	**63**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54			1							**1**
55-59										
60-64			1	1						**2**
65-69										
70-74										
75+										
Total	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**3**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	793
40-44		
45-49	1	2,582
50-54	5	1,986
55-59	1	1,885
60-64		
65-69	2	365
70-74	2	55
75+		
Total	12	1,336

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	5,186
60-64	8	1,018
65-69	6	633
70-74	6	619
75-79	8	702
80-84	3	149
85-89	1	178
90-94		
95-99		
100+		
Total	33	821

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Port of Hood River/2788
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

November 2015
Port of Hood River/2788

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Port of Hood River/2788

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of Hood River -- #2788

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Port of Hood River to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Hood River.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Port of Hood River

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	12.83%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	1.79%	1.79%	1.79%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**15.63%**	**10.90%**	**15.70%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**16.13%**	**11.33%**	**16.13%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 81%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	11.62%	11.62%
Minimum 2017-2019 Rate	8.62%	5.62%
Maximum 2017-2019 Rate	14.62%	17.62%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$1,642,037	$1,682,449	$40,412	98%	$825,736	5%
12/31/2010	1,847,219	1,892,645	45,426	98%	874,376	5%
12/31/2011	1,776,221	1,927,241	151,020	92%	898,223	17%
12/31/2012	2,009,040	2,223,288	214,248	90%	1,003,206	21%
12/31/2013	2,341,088	2,399,064	57,976	98%	1,035,612	6%
12/31/2014	2,370,756	2,932,042	561,286	81%	1,045,521	54%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Hood River

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$561,286	$57,976
Allocated pooled OPSRP UAL	119,526	73,224
Side account	0	0
Net unfunded pension actuarial accrued liability	680,812	131,200
Combined valuation payroll	1,045,521	1,035,612
Net pension UAL as a percentage of payroll	65%	13%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$8,310	$14,334

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$82,614	$77,004
Tier 1/Tier 2 valuation payroll	643,819	696,393
Tier 1/Tier 2 pension normal cost rate	12.83%	11.06%
Tier 1/ Tier 2 Actuarial accrued liability	$2,932,042	$2,399,064
Actuarial asset value	2,370,756	2,341,088
Tier 1/Tier 2 Unfunded actuarial accrued liability	561,286	57,976
Tier 1/ Tier 2 Funded status	81%	98%
Combined valuation payroll	$1,045,521	$1,035,612
Tier 1/Tier 2 UAL as a percentage of payroll	54%	6%
Tier 1/Tier 2 UAL rate	1.79%	0.56%
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	13	15
Tier 1/Tier 2 dormant members	6	5
Tier 1/Tier 2 retirees and beneficiaries	9	9

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	December 31, 2014	December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	1,045,521	1,035,612
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$351,647	$388,864
2. Employer reserves	1,543,045	1,583,796
3. Benefits in force reserve	476,064	368,428
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,370,756**	**$2,341,088**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$2,341,088
2.	Regular employer contributions	58,031
3.	Benefit payments and expense	(78,625)
4.	Adjustments [1]	(114,147)
5.	Interest credited	164,409
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,370,756**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	21,551	26,927
Tier 2 Police & Fire	0	0
Tier 2 General Service	61,063	50,077
Total	**$82,614**	**$77,004**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$69,758	$82,614	$12,856

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	819,374	892,006
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	912,095	747,805
▪ **Total Active Members**	**$1,731,469**	**$1,639,811**
Dormant Members	277,021	165,360
Retired Members and Beneficiaries	923,552	593,893
Total Actuarial Accrued Liability	**$2,932,042**	**$2,399,064**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$2,590,442	$2,932,042	$341,600

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$2,932,042	$2,399,064
2. Actuarial value of assets	2,370,756	2,341,088
3. Unfunded accrued liability *(1. – 2.)*	561,286	57,976
4. Funded percentage *(2. ÷ 1.)*	81%	98%
5. Combined valuation payroll	$1,045,521	$1,035,612
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	54%	6%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$57,976	$4,196	$4,320	$58,100	$4,352
December 31, 2014	N/A	N/A	N/A	$503,186	$36,410
Total				**$561,286**	**$40,762**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$2,399,064
b. Normal cost at December 31, 2013	77,004
c. Benefit payments during 2014	(78,020)
d. Interest at 7.75% to December 31, 2014	185,888
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	2,583,936
f. Change in actuarial accrued liability due to assumption, method, and plan changes	341,600
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	2,925,536
2. Actuarial accrued liability at December 31, 2014	2,932,042
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(6,506)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	2,341,088
b. Contributions for 2014[1]	58,031
c. Benefit payments and expenses during 2014	(78,625)
d. Interest at 7.75% to December 31, 2014	180,636
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	2,501,130
5. Actuarial value of assets at December 31, 2014	2,370,756
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(130,374)
7. Total actuarial gain/(loss) *(3. + 6.)*	**($136,880)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$57,976**
2. Expected increase	24,830
3. Liability (gain)/loss	6,506
4. Asset (gain)/loss	130,374
5. Change due to changes in assumptions, methods, and plan provisions	341,600
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$561,286**

1 *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	21,551	173,786	12.40%	26,927	242,228	11.12%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	61,063	470,033	12.99%	50,077	454,165	11.03%
Total	**$82,614**	**$643,819**	**12.83%**	**$77,004**	**$696,393**	**11.06%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$561,286	$57,976
2. Next year's Tier 1/Tier 2 UAL payment	40,762	4,196
3. Combined valuation payroll	1,045,521	1,035,612
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	3.90%	0.41%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.83%	11.06%
b. Tier 1/Tier 2 UAL rate	3.90%	0.41%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	16.88%	11.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	11.62%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	11.62%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.32%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	81%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	8.62%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	14.62%
7. Advisory July 1, 2017 total pension rate, before adjustment	16.88%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.26%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	3.90%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	1.64%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	14.62%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	12.83%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	12.83%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	14.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	12.83%	11.06%
b. Tier 1/Tier 2 UAL rate	1.64%	0.41%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	14.62%	11.62%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$173,786	$0	$173,786
Tier 2	470,033	0	470,033
Tier 1/Tier 2 valuation payroll	643,819	0	643,819
OPSRP valuation payroll	401,702	0	401,702
Combined valuation payroll	**$1,045,521**	**$0**	**$1,045,521**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	3	10	12	25	4	11	11	26
Police & Fire	0	0	0	0	0	0	0	0
Total	3	10	12	25	4	11	11	26
Active Members with previous service segments with the employer								
General Service	2	1	N/A	3	2	1	N/A	3
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	2	1	N/A	3	2	1	N/A	3
Dormant Members								
General Service	2	4	1	7	2	3	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	2	4	1	7	2	3	0	5
Retired Members and Beneficiaries								
General Service	8	1	0	9	8	1	0	9
Police & Fire	0	0	0	0	0	0	0	0
Total	8	1	0	9	8	1	0	9
Grand Total Number of Members	**15**	**16**	**13**	**44**	**16**	**16**	**11**	**43**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
	Years of Service									
<20										
20-24										
25-29										
30-34										
35-39										
40-44				1						1
45-49			3							3
50-54										
55-59		1			1					2
60-64		2	2	1						5
65-69										
70-74										
75+			1		1					2
Total	0	3	6	2	2	0	0	0	0	13

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	3	538
60-64	1	473
65-69	1	49
70-74		
75+	1	231
Total	6	395

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	2	1,442
60-64	2	590
65-69	1	221
70-74	2	190
75-79	1	597
80-84	1	216
85-89		
90-94		
95-99		
100+		
Total	9	609

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Port of St Helens/2570
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Port of St Helens/2570

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA	Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary	Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of St Helens -- #2570

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Port of St Helens to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of St Helens.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Port of St Helens

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	14.20%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(1.24%)	(1.24%)	(1.24%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**13.97%**	**7.87%**	**12.67%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**14.47%**	**8.30%**	**13.10%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 96%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	9.96%	9.96%
Minimum 2017-2019 Rate	6.96%	3.96%
Maximum 2017-2019 Rate	12.96%	15.96%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$1,605,145	$1,723,418	$118,273	93%	$482,355	25%
12/31/2010	1,687,521	1,734,253	46,732	97%	557,265	8%
12/31/2011	1,659,759	1,763,906	104,147	94%	703,056	15%
12/31/2012	1,808,628	1,712,608	(96,020)	106%	737,966	(13%)
12/31/2013	1,971,697	1,758,059	(213,638)	112%	740,374	(29%)
12/31/2014	2,023,680	2,101,780	78,100	96%	781,936	10%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of St Helens

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$78,100	($213,638)
Allocated pooled OPSRP UAL	89,392	52,349
Side account	0	0
Net unfunded pension actuarial accrued liability	167,492	(161,289)
Combined valuation payroll	781,936	740,374
Net pension UAL as a percentage of payroll	21%	(22%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$6,215	$10,248

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$28,351	$22,738
Tier 1/Tier 2 valuation payroll	199,717	191,118
Tier 1/Tier 2 pension normal cost rate	14.20%	11.90%
Tier 1/ Tier 2 Actuarial accrued liability	$2,101,780	$1,758,059
Actuarial asset value	2,023,680	1,971,697
Tier 1/Tier 2 Unfunded actuarial accrued liability	78,100	(213,638)
Tier 1/ Tier 2 Funded status	96%	112%
Combined valuation payroll	$781,936	$740,374
Tier 1/Tier 2 UAL as a percentage of payroll	10%	(29%)
Tier 1/Tier 2 UAL rate	(1.24%)	(1.94%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	2	2
Tier 1/Tier 2 dormant members	4	4
Tier 1/Tier 2 retirees and beneficiaries	6	6

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	781,936	740,374
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$122,796	$115,935
2. Employer reserves	1,157,668	1,073,304
3. Benefits in force reserve	743,216	782,458
4. Total market value of assets ***(1. + 2. + 3.)***	**$2,023,680**	**$1,971,697**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$1,971,697
2.	Regular employer contributions	6,676
3.	Benefit payments and expense	(122,748)
4.	Adjustments [1]	32,150
5.	Interest credited	135,904
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$2,023,680**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	16,600	13,438
Tier 2 Police & Fire	0	0
Tier 2 General Service	11,751	9,300
Total	**$28,351**	**$22,738**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$23,638	$28,351	$4,713

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	93,128	61,754
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	314,158	220,191
▪ **Total Active Members**	**$407,286**	**$281,945**
Dormant Members	252,674	214,818
Retired Members and Beneficiaries	1,441,820	1,261,296
Total Actuarial Accrued Liability	**$2,101,780**	**$1,758,059**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,834,061	$2,101,780	$267,719

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$2,101,780	$1,758,059
2. Actuarial value of assets	2,023,680	1,971,697
3. Unfunded accrued liability *(1. – 2.)*	78,100	(213,638)
4. Funded percentage *(2. ÷ 1.)*	96%	112%
5. Combined valuation payroll	$781,936	$740,374
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	10%	(29%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($213,638)	($15,463)	($15,919)	($214,094)	($16,037)
December 31, 2014	N/A	N/A	N/A	$292,194	$21,143
Total				**$78,100**	**$5,106**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$1,758,059
b. Normal cost at December 31, 2013	22,738
c. Benefit payments during 2014	(121,802)
d. Interest at 7.75% to December 31, 2014	132,411
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,791,406
f. Change in actuarial accrued liability due to assumption, method, and plan changes	267,719
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	2,059,125
2. Actuarial accrued liability at December 31, 2014	2,101,780
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(42,655)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	1,971,697
b. Contributions for 2014[1]	6,676
c. Benefit payments and expenses during 2014	(122,748)
d. Interest at 7.75% to December 31, 2014	148,309
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	2,003,935
5. Actuarial value of assets at December 31, 2014	2,023,680
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	19,746
7. Total actuarial gain/(loss) *(3. + 6.)*	**($22,909)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($213,638)**
2. Expected increase	1,110
3. Liability (gain)/loss	42,655
4. Asset (gain)/loss	(19,746)
5. Change due to changes in assumptions, methods, and plan provisions	267,719
6. UAL at December 31, 2014 *(1. + 2. + 3. + 4. + 5.)*	**$78,100**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	16,600	91,090	18.22%	13,438	87,119	15.42%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	11,751	108,627	10.82%	9,300	103,999	8.94%
Total	**$28,351**	**$199,717**	**14.20%**	**$22,738**	**$191,118**	**11.90%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$78,100	($213,638)
2. Next year's Tier 1/Tier 2 UAL payment	5,106	(15,463)
3. Combined valuation payroll	781,936	740,374
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	0.65%	(2.09%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.20%	11.90%
b. Tier 1/Tier 2 UAL rate	0.65%	(2.09%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	15.00%	9.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	9.96%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	9.96%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.99%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	96%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	6.96%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	12.96%
7. Advisory July 1, 2017 total pension rate, before adjustment	15.00%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(2.04%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	0.65%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.39%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	12.96%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	14.20%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	14.20%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	12.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	14.20%	11.90%
b. Tier 1/Tier 2 UAL rate	(1.39%)	(2.09%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	12.96%	9.96%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$91,090	$0	$91,090
Tier 2	108,627	0	108,627
Tier 1/Tier 2 valuation payroll	199,717	0	199,717
OPSRP valuation payroll	582,219	0	582,219
Combined valuation payroll	**$781,936**	**$0**	**$781,936**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	1	9	11	1	1	9	11
Police & Fire	0	0	0	0	0	0	0	0
Total	1	1	9	11	1	1	9	11
Active Members with previous service segments with the employer								
General Service	0	1	N/A	1	0	1	N/A	1
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	1	N/A	1	0	1	N/A	1
Dormant Members								
General Service	1	3	0	4	1	3	1	5
Police & Fire	0	0	0	0	0	0	0	0
Total	1	3	0	4	1	3	1	5
Retired Members and Beneficiaries								
General Service	5	1	1	7	5	1	0	6
Police & Fire	0	0	0	0	0	0	0	0
Total	5	1	1	7	5	1	0	6
Grand Total Number of Members	**7**	**6**	**10**	**23**	**7**	**6**	**10**	**23**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49			1							**1**
50-54						1				**1**
55-59										
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**2**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59	4	508
60-64		
65-69		
70-74		
75+		
Total	4	508

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59	1	784
60-64		
65-69	1	5,594
70-74	1	1,701
75-79		
80-84	2	452
85-89		
90-94	1	918
95-99		
100+		
Total	6	1,650

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Port of Umatilla/2581
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

November 2015
Port of Umatilla/2581

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Port of Umatilla -- #2581

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Port of Umatilla to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Umatilla.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Port of Umatilla

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	19.35%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	1.00%	1.00%	1.00%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**21.36%**	**10.11%**	**14.91%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**21.86%**	**10.54%**	**15.34%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 78%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	16.96%	16.96%
Minimum 2017-2019 Rate	13.57%	10.18%
Maximum 2017-2019 Rate	20.35%	23.74%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$1,188,372	$1,391,298	$202,926	85%	$138,238	147%
12/31/2010	1,286,852	1,460,214	173,362	88%	142,337	122%
12/31/2011	1,302,983	1,727,626	424,643	75%	209,068	203%
12/31/2012	1,466,216	1,609,488	143,272	91%	155,036	92%
12/31/2013	1,478,945	1,673,028	194,083	88%	152,543	127%
12/31/2014	1,514,304	1,936,061	421,757	78%	147,945	285%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Umatilla

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$421,757	$194,083
Allocated pooled OPSRP UAL	16,913	10,786
Side account	0	0
Net unfunded pension actuarial accrued liability	438,670	204,869
Combined valuation payroll	147,945	152,543
Net pension UAL as a percentage of payroll	297%	134%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,176	$2,111

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$28,626	$22,875
Tier 1/Tier 2 valuation payroll	147,945	152,543
Tier 1/Tier 2 pension normal cost rate	19.35%	15.00%
Tier 1/ Tier 2 Actuarial accrued liability	$1,936,061	$1,673,028
Actuarial asset value	1,514,304	1,478,945
Tier 1/Tier 2 Unfunded actuarial accrued liability	421,757	194,083
Tier 1/ Tier 2 Funded status	78%	88%
Combined valuation payroll	$147,945	$152,543
Tier 1/Tier 2 UAL as a percentage of payroll	285%	127%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	1.00%	1.96%
Tier 1/Tier 2 active members [1]	1	1
Tier 1/Tier 2 dormant members	0	0
Tier 1/Tier 2 retirees and beneficiaries	4	5

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	147,945	152,543
3. Amortization factor	10.118	10.703
4. Total side account rate ***(-1. ÷ 2. ÷ 3.)*** [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$165,784	$154,427
2. Employer reserves	665,541	600,731
3. Benefits in force reserve	682,980	723,787
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,514,304**	**$1,478,945**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$1,478,945
2.	Regular employer contributions	19,809
3.	Benefit payments and expense	(112,799)
4.	Adjustments [1]	25,259
5.	Interest credited	103,090
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,514,304**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	28,626	22,875
Tier 2 Police & Fire	0	0
Tier 2 General Service	0	0
Total	**$28,626**	**$22,875**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$23,668	$28,626	$4,958

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	December 31, 2013
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	611,097	506,309
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	0	0
▪ **Total Active Members**	**$611,097**	**$506,309**
Dormant Members	0	0
Retired Members and Beneficiaries	1,324,964	1,166,719
Total Actuarial Accrued Liability	**$1,936,061**	**$1,673,028**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	After Changes	Net Change
Actuarial Accrued Liability	$1,684,342	$1,936,061	$251,719

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$1,936,061	$1,673,028
2. Actuarial value of assets	1,514,304	1,478,945
3. Unfunded accrued liability *(1. – 2.)*	421,757	194,083
4. Funded percentage *(2. ÷ 1.)*	78%	88%
5. Combined valuation payroll	$147,945	$152,543
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	285%	127%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$194,083	$14,048	$14,462	$194,497	$14,569
December 31, 2014	N/A	N/A	N/A	$227,260	$16,444
Total				**$421,757**	**$31,013**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$1,673,028
b. Normal cost at December 31, 2013	22,875
c. Benefit payments during 2014	(111,930)
d. Interest at 7.75% to December 31, 2014	126,209
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,710,182
f. Change in actuarial accrued liability due to assumption, method, and plan changes	251,719
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	1,961,901
2. Actuarial accrued liability at December 31, 2014	1,936,061
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	25,840
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	1,478,945
b. Contributions for 2014[1]	19,809
c. Benefit payments and expenses during 2014	(112,799)
d. Interest at 7.75% to December 31, 2014	111,015
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	1,496,970
5. Actuarial value of assets at December 31, 2014	1,514,304
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	17,335
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$43,175**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$194,083**
2. Expected increase	19,130
3. Liability (gain)/loss	(25,840)
4. Asset (gain)/loss	(17,335)
5. Change due to changes in assumptions, methods, and plan provisions	251,719
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$421,757**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	28,626	147,945	19.35%	22,875	152,543	15.00%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	0	0	0.00%	0	0	0.00%
Total	**$28,626**	**$147,945**	**19.35%**	**$22,875**	**$152,543**	**15.00%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$421,757	$194,083
2. Next year's Tier 1/Tier 2 UAL payment	31,013	14,048
3. Combined valuation payroll	147,945	152,543
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	20.96%	9.21%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.35%	15.00%
b. Tier 1/Tier 2 UAL rate	20.96%	9.21%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	40.46%	24.36%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	16.96%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	16.96%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	3.39%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.39%
c. Funded percentage	78%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.39%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	13.57%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	20.35%
7. Advisory July 1, 2017 total pension rate, before adjustment	40.46%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(20.11%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	20.96%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	0.85%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	20.35%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	19.35%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	19.35%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	20.35%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	19.35%	15.00%
b. Tier 1/Tier 2 UAL rate	0.85%	1.81%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	20.35%	16.96%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$147,945	$0	$147,945
Tier 2	0	0	0
Tier 1/Tier 2 valuation payroll	147,945	0	147,945
OPSRP valuation payroll	0	0	0
Combined valuation payroll	**$147,945**	**$0**	**$147,945**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	1	0	0	1	1	0	0	1
Police & Fire	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1
Active Members with previous service segments with the employer								
General Service	0	0	N/A	0	0	0	N/A	0
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	0	0	N/A	0	0	0	N/A	0
Dormant Members								
General Service	0	0	0	0	0	0	0	0
Police & Fire	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Retired Members and Beneficiaries								
General Service	4	0	0	4	5	0	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	4	0	0	4	5	0	0	5
Grand Total Number of Members	**5**	**0**	**0**	**5**	**6**	**0**	**0**	**6**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44										
45-49										
50-54										
55-59										
60-64					1					**1**
65-69										
70-74										
75+										
Total	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49		
50-54		
55-59		
60-64		
65-69		
70-74		
75+		
Total		

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	1	3,439
65-69	1	2,371
70-74	1	1,846
75-79		
80-84		
85-89	1	173
90-94		
95-99		
100+		
Total	4	1,957

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Redmond Area Park & Recreation District/2689
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Redmond Area Park & Recreation District/2689

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Redmond Area Park & Recreation District -- #2689

November 2015

CONTENTS

Executive Summary

Milliman has prepared this report for Redmond Area Park & Recreation District to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Redmond Area Park & Recreation District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Redmond Area Park & Recreation District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.64%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	(1.68%)	(1.68%)	(1.68%)
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**12.97%**	**7.43%**	**12.23%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**13.47%**	**7.86%**	**12.66%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 105%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	8.96%	8.96%
Minimum 2017-2019 Rate	5.96%	2.96%
Maximum 2017-2019 Rate	11.96%	14.96%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$1,072,442	$981,667	($90,775)	109%	$371,612	(24%)
12/31/2010	1,158,697	1,021,030	(137,667)	113%	522,965	(26%)
12/31/2011	1,131,545	1,064,956	(66,589)	106%	590,808	(11%)
12/31/2012	1,271,322	1,134,298	(137,024)	112%	766,663	(18%)
12/31/2013	1,428,866	1,179,561	(249,305)	121%	719,810	(35%)
12/31/2014	1,488,341	1,421,829	(66,512)	105%	739,768	(9%)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Redmond Area Park & Recreation District

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	($66,512)	($249,305)
Allocated pooled OPSRP UAL	84,572	50,895
Side account	0	0
Net unfunded pension actuarial accrued liability	18,060	(198,410)
Combined valuation payroll	739,768	719,810
Net pension UAL as a percentage of payroll	2%	(28%)
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$5,880	$9,963

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	December 31, 2013
Normal cost	$32,808	$25,475
Tier 1/Tier 2 valuation payroll	240,566	219,891
Tier 1/Tier 2 pension normal cost rate	13.64%	11.59%
Tier 1/ Tier 2 Actuarial accrued liability	$1,421,829	$1,179,561
Actuarial asset value	1,488,341	1,428,866
Tier 1/Tier 2 Unfunded actuarial accrued liability	(66,512)	(249,305)
Tier 1/ Tier 2 Funded status	105%	121%
Combined valuation payroll	$739,768	$719,810
Tier 1/Tier 2 UAL as a percentage of payroll	(9%)	(35%)
Tier 1/Tier 2 UAL rate	(1.68%)	(2.63%)
(includes Multnomah Fire District #10)		
Tier 1/Tier 2 active members [1]	6	6
Tier 1/Tier 2 dormant members	7	5
Tier 1/Tier 2 retirees and beneficiaries	8	8

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	739,768	719,810
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$317,662	$307,555
2. Employer reserves	959,056	896,763
3. Benefits in force reserve	211,623	224,547
4. Total market value of assets ***(1. + 2. + 3.)***	**$1,488,341**	**$1,428,866**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$1,428,866
2.	Regular employer contributions	9,185
3.	Benefit payments and expense	(34,951)
4.	Adjustments [1]	(17,080)
5.	Interest credited	102,321
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$1,488,341**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	15,555	12,527
Tier 2 Police & Fire	0	0
Tier 2 General Service	17,253	12,948
Total	**$32,808**	**$25,475**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$27,691	$32,808	$5,117

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	556,556	480,055
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	306,643	242,526
▪ **Total Active Members**	**$863,199**	**$722,581**
Dormant Members	148,088	95,017
Retired Members and Beneficiaries	410,542	361,963
Total Actuarial Accrued Liability	**$1,421,829**	**$1,179,561**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$1,269,355	$1,421,829	$152,474

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$1,421,829	$1,179,561
2. Actuarial value of assets	1,488,341	1,428,866
3. Unfunded accrued liability *(1. – 2.)*	(66,512)	(249,305)
4. Funded percentage *(2. ÷ 1.)*	105%	121%
5. Combined valuation payroll	$739,768	$719,810
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	(9%)	(35%)

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	($249,305)	($18,045)	($18,577)	($249,837)	($18,714)
December 31, 2014	N/A	N/A	N/A	$183,325	$13,265
Total				**($66,512)**	**($5,449)**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$1,179,561
b. Normal cost at December 31, 2013	25,475
c. Benefit payments during 2014	(34,682)
d. Interest at 7.75% to December 31, 2014	91,059
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	1,261,413
f. Change in actuarial accrued liability due to assumption, method, and plan changes	152,474
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	1,413,887
2. Actuarial accrued liability at December 31, 2014	1,421,829
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	(7,942)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	1,428,866
b. Contributions for 2014[1]	9,185
c. Benefit payments and expenses during 2014	(34,951)
d. Interest at 7.75% to December 31, 2014	109,739
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	1,512,838
5. Actuarial value of assets at December 31, 2014	1,488,341
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	(24,497)
7. Total actuarial gain/(loss) ***(3. + 6.)***	**($32,439)**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**($249,305)**
2. Expected increase	(2,120)
3. Liability (gain)/loss	7,942
4. Asset (gain)/loss	24,497
5. Change due to changes in assumptions, methods, and plan provisions	152,474
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**($66,512)**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	15,555	98,089	15.86%	12,527	94,266	13.29%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	17,253	142,477	12.11%	12,948	125,625	10.31%
Total	**$32,808**	**$240,566**	**13.64%**	**$25,475**	**$219,891**	**11.59%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	($66,512)	($249,305)
2. Next year's Tier 1/Tier 2 UAL payment	(5,449)	(18,045)
3. Combined valuation payroll	739,768	719,810
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	(0.74%)	(2.51%)

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.64%	11.59%
b. Tier 1/Tier 2 UAL rate	(0.74%)	(2.51%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	13.05%	9.23%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	8.96%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	8.96%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	1.79%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	105%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	5.96%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	11.96%
7. Advisory July 1, 2017 total pension rate, before adjustment	13.05%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(1.09%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	(0.74%)
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	(1.83%)
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	11.96%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.64%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.64%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	11.96%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.64%	11.59%
b. Tier 1/Tier 2 UAL rate	(1.83%)	(2.78%)
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	11.96%	8.96%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$98,089	$0	$98,089
Tier 2	142,477	0	142,477
Tier 1/Tier 2 valuation payroll	240,566	0	240,566
OPSRP valuation payroll	499,202	0	499,202
Combined valuation payroll	**$739,768**	**$0**	**$739,768**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	2	4	31	37	2	4	28	34
Police & Fire	0	0	0	0	0	0	0	0
Total	2	4	31	37	2	4	28	34
Active Members with previous service segments with the employer								
General Service	7	1	N/A	8	8	2	N/A	10
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	7	1	N/A	8	8	2	N/A	10
Dormant Members								
General Service	2	5	0	7	1	4	0	5
Police & Fire	0	0	0	0	0	0	0	0
Total	2	5	0	7	1	4	0	5
Retired Members and Beneficiaries								
General Service	8	0	0	8	8	0	0	8
Police & Fire	0	0	0	0	0	0	0	0
Total	8	0	0	8	8	0	0	8
Grand Total Number of Members	**19**	**10**	**31**	**60**	**19**	**10**	**28**	**57**

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20										
20-24										
25-29										
30-34										
35-39										
40-44			1		1					**2**
45-49										
50-54		1		1						**2**
55-59				1						**1**
60-64				1						**1**
65-69										
70-74										
75+										
Total	**0**	**1**	**1**	**3**	**1**	**0**	**0**	**0**	**0**	**6**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	Count	Average Deferred Monthly Benefit
<20		
20-24		
25-29		
30-34		
35-39	1	8
40-44	2	132
45-49	1	954
50-54	1	244
55-59	2	139
60-64		
65-69		
70-74		
75+		
Total	7	250

Retired Members and Beneficiaries

Age	Count	Average Monthly Benefit
<45		
45-49		
50-54		
55-59		
60-64	2	858
65-69	3	101
70-74	1	315
75-79		
80-84		
85-89	1	330
90-94	1	72
95-99		
100+		
Total	8	342

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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November 2015

Rockwood Water PUD/2672
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2014. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2017 through June 30, 2019 will be calculated in the December 31, 2015 actuarial valuation.

This report reflects the System's benefit provisions in effect as of December 31, 2014, as adjusted for the Oregon Supreme Court decision announced in April 2015. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of recent changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

November 2015
Rockwood Water PUD/2672

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Rockwood Water PUD -- #2672

November 2015

Secondary Employers

2554 Hazelwood Water District

CONTENTS

Executive Summary

Milliman has prepared this report for Rockwood Water PUD to:

- Provide summary December 31, 2014 valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Health Insurance Account (RHIA),
- Provide advisory information calculated as of December 31, 2014 on estimated employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2014, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the OPSRP and RHIA. The full development of these results can be found in the December 31, 2014 system-wide actuarial valuation report. This report develops advisory employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Rockwood Water PUD.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2014 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2017 - 2019 Employer Rates Calculated as of December 31, 2014 for Rockwood Water PUD

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.99%	8.10%	12.90%
Tier 1/Tier 2 UAL rate[1]	3.63%	3.63%	3.63%
OPSRP UAL rate	1.01%	1.01%	1.01%
Side account rate relief	0.00%	0.00%	0.00%
Net pension contribution rate	**18.63%**	**12.74%**	**17.54%**
Retiree Healthcare			
Normal cost rate	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**19.13%**	**13.17%**	**17.97%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2017 to June 2019 Biennium

The rate collar limits changes in contribution rates, but does not limit changes in rates for individual employers related to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2017, which will depend on the funded status as of December 31, 2015. If the employer's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the employer's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2014 is 81%.

Funded Status as of December 31, 2015	70% to 130%	Under 60% or Over 140%
2015-2017 Normal Cost + Tier 1/Tier 2 UAL Rate	14.62%	14.62%
Minimum 2017-2019 Rate	11.62%	8.62%
Maximum 2017-2019 Rate	17.62%	20.62%

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS going forward and is not included in this report.

Executive Summary

Accounting Information (continued)

Schedule of Funding Progress

Under GASB 27, the Schedule of Funding Progress for Tier 1/Tier 2 pension liabilities was reported in the Required Supplementary Information. This schedule is no longer required now that GASB 68 has replaced GASB 27. However, for additional information and the sake of historical comparison, the updated schedule is shown below for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) ÷ c)
12/31/2009	$6,656,442	$8,255,899	$1,599,457	81%	$1,424,777	112%
12/31/2010	7,086,107	8,405,996	1,319,889	84%	1,403,320	94%
12/31/2011	6,767,732	8,570,288	1,802,556	79%	1,285,852	140%
12/31/2012	7,031,202	8,782,146	1,750,944	80%	1,153,789	152%
12/31/2013	7,741,377	8,677,555	936,178	89%	1,240,344	75%
12/31/2014	7,886,747	9,725,263	1,838,516	81%	1,207,711	152%

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2015 through June 30, 2017 was calculated as a part of the December 31, 2013 valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1 / Tier 2	General Service	Police & Fire
July 1, 2013 to June 30, 2015	0.59%	0.49%	0.49%
July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Rockwood Water PUD

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
T1/T2 UAL	$1,838,516	$936,178
Allocated pooled OPSRP UAL	138,068	87,700
Side account	0	0
Net unfunded pension actuarial accrued liability	1,976,584	1,023,878
Combined valuation payroll	1,207,711	1,240,344
Net pension UAL as a percentage of payroll	164%	83%
Calculated side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$9,600	$17,168

In the above exhibit, UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. Pool total results are summarized on page 7 of this report. Allocated amounts shown above differ from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

Tier 1/Tier 2

	Actuarial Valuation as of	
	December 31, 2014	**December 31, 2013**
Normal cost	$74,505	$77,496
Tier 1/Tier 2 valuation payroll	532,542	626,469
Tier 1/Tier 2 pension normal cost rate	13.99%	12.37%
Tier 1/ Tier 2 Actuarial accrued liability	$9,725,263	$8,677,555
Actuarial asset value	7,886,747	7,741,377
Tier 1/Tier 2 Unfunded actuarial accrued liability	1,838,516	936,178
Tier 1/ Tier 2 Funded status	81%	89%
Combined valuation payroll	$1,207,711	$1,240,344
Tier 1/Tier 2 UAL as a percentage of payroll	152%	75%
Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10)	3.63%	2.25%
Tier 1/Tier 2 active members [1]	7	9
Tier 1/Tier 2 dormant members	8	7
Tier 1/Tier 2 retirees and beneficiaries	23	23

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
General service normal cost	$301.3	$234.7
OPSRP general service valuation payroll	3,720.4	3,200.0
General service normal cost rate	8.10%	7.33%
Police and fire normal cost	$59.6	$45.5
OPSRP police and fire valuation payroll	462.3	398.1
Police and fire normal cost rate	12.90%	11.44%
Actuarial accrued liability	$3,064.1	$2,243.3
Actuarial asset value	2,024.6	1,630.2
Unfunded actuarial accrued liability	1,039.5	613.2
Funded status	66%	73%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	11%	7%
UAL rate	1.01%	0.61%

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of December 31, 2014	Actuarial Valuation as of December 31, 2013
Normal cost	$3.5	$4.0
Tier 1 / Tier 2 valuation payroll	4,933.1	5,073.7
Normal cost rate	0.07%	0.08%
Actuarial accrued liability	$468.4	$473.6
Actuarial asset value	395.9	353.5
Unfunded actuarial accrued liability	72.5	120.0
Funded status	85%	75%
Combined valuation payroll	$9,115.8	$8,671.8
UAL as a percentage of payroll	1%	1%
UAL rate	0.43%	0.45%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2013	**N/A**		
2. Deposits made during 2014		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2014			
5. Side account earnings during 2014			
6. Side account as of December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2014	December 31, 2013
Side account 1	$0	$0
Side account 2	0	0
Side account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2014	December 31, 2013
1. Total side account	$0	$0
2. Combined valuation payroll	1,207,711	1,240,344
3. Amortization factor	10.118	10.703
4. Total side account rate *(-1. ÷ 2. ÷ 3.)* [1]	0.00%	0.00%

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

Tier 1/Tier 2 Valuation Results

Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

Summary of Market Value of Tier 1/Tier 2 Pension Assets

	December 31, 2014	December 31, 2013
1. Member reserves	$1,268,273	$1,220,442
2. Employer reserves	3,268,420	2,992,501
3. Benefits in force reserve	3,350,054	3,528,433
4. Total market value of assets ***(1. + 2. + 3.)***	**$7,886,747**	**$7,741,377**

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

Reconciliation of Tier 1/Tier 2 Pension Assets

		December 31, 2013 to December 31, 2014
1.	Market value of assets at beginning of year	$7,741,377
2.	Regular employer contributions	74,103
3.	Benefit payments and expense	(553,286)
4.	Adjustments [1]	86,131
5.	Interest credited	538,422
6.	Total transferred from side accounts	0
7.	**Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)***	**$7,886,747**

[1] *Note the adjustment item above includes a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

Tier 1/Tier 2 Valuation Results

Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Summary of Normal Cost by Tier/Member Classification

	December 31, 2014	December 31, 2013
Tier 1 Police & Fire	$0	$0
Tier 1 General Service	38,240	31,972
Tier 2 Police & Fire	0	0
Tier 2 General Service	36,265	45,524
Total	**$74,505**	**$77,496**

Change in Tier 1/Tier 2 Normal Cost Due to Changes

The following table shows the impact of the assumption, method, and plan changes on normal cost as of December 31, 2014.

	Before Changes	After Changes	Net Change
Normal Cost	$63,983	$74,505	$10,522

Tier 1/Tier 2 Valuation Results

Liabilities

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits allocated to service performed before the valuation date by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount of assets that would need to be accumulated as of the valuation date to provide for the portion of benefits allocated to service already performed.

Summary of Actuarial Accrued Liability by Tier/Member Classification

	December 31, 2014	**December 31, 2013**
Active Members		
▪ Tier 1 Police & Fire	$0	$0
▪ Tier 1 General Service	1,339,984	1,146,416
▪ Tier 2 Police & Fire	0	0
▪ Tier 2 General Service	744,640	895,874
▪ **Total Active Members**	**$2,084,624**	**$2,042,290**
Dormant Members	1,141,617	947,555
Retired Members and Beneficiaries	6,499,022	5,687,710
Total Actuarial Accrued Liability	**$9,725,263**	**$8,677,555**

Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Changes

The following table shows the impact of the assumption, method, and plan changes on the actuarial accrued liability as of December 31, 2014.

	Before Changes	**After Changes**	**Net Change**
Actuarial Accrued Liability	$8,602,753	$9,725,263	$1,122,510

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

	December 31, 2014	December 31, 2013
1. Actuarial accrued liability	$9,725,263	$8,677,555
2. Actuarial value of assets	7,886,747	7,741,377
3. Unfunded accrued liability *(1. – 2.)*	1,838,516	936,178
4. Funded percentage *(2. ÷ 1.)*	81%	89%
5. Combined valuation payroll	$1,207,711	$1,240,344
6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)*	152%	75%

Reconciliation of UAL Bases

Beginning with the December 31, 2013 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. For subsequent odd-year valuations, amortization schedules are calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2015, with the estimate based on experience through the end of 2014. The payment schedules for the unamortized balances as of December 31, 2014 have been modified to reflect the lowering of the investment return assumption first effective with this valuation.

Amortization Base	UAL December 31, 2013	Payment	Interest	UAL December 31, 2014	Next Year's Payment
December 31, 2013	$936,178	$67,760	$69,758	$938,176	$70,275
December 31, 2014	N/A	N/A	N/A	$900,340	$65,148
Total				**$1,838,516**	**$135,423**

Tier 1/Tier 2 Valuation Results

Unfunded Accrued Liability (UAL)

Actuarial Gain or Loss since Prior Valuation

The system-wide actuarial valuation report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2013	$8,677,555
b. Normal cost at December 31, 2013	77,496
c. Benefit payments during 2014	(549,025)
d. Interest at 7.75% to December 31, 2014	654,239
e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)*	8,860,265
f. Change in actuarial accrued liability due to assumption, method, and plan changes	1,122,510
g. Expected actuarial accrued liability at December 31, 2014 *(e. + f.)*	9,982,775
2. Actuarial accrued liability at December 31, 2014	9,725,263
3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)*	257,512
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2013	7,741,377
b. Contributions for 2014[1]	74,103
c. Benefit payments and expenses during 2014	(553,286)
d. Interest at 7.75% to December 31, 2014	581,388
e. Expected actuarial value of assets at December 31, 2014 *(a. + b. + c. + d.)*	7,843,582
5. Actuarial value of assets at December 31, 2014	7,886,747
6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)*	43,165
7. Total actuarial gain/(loss) ***(3. + 6.)***	**$300,677**

Unfunded Accrued Liability Reconciliation

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2013 is provided below.

1. UAL at December 31, 2013	**$936,178**
2. Expected increase	80,505
3. Liability (gain)/loss	(257,512)
4. Asset (gain)/loss	(43,165)
5. Change due to changes in assumptions, methods, and plan provisions	1,122,510
6. UAL at December 31, 2014 ***(1. + 2. + 3. + 4. + 5.)***	**$1,838,516**

[1] *Includes rate relief from side accounts.*

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Normal Cost Rate

For independent employers, the normal cost calculated previously is divided by projected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

Development of Tier 1/Tier 2 Normal Cost Rate

	December 31, 2014			December 31, 2013		
	Normal Cost	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**	**Normal Cost**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost Rate**
Tier 1 Police & Fire	$0	$0	0.00%	$0	$0	0.00%
Tier 1 General Service	38,240	174,668	21.89%	31,972	139,673	22.89%
Tier 2 Police & Fire	0	0	0.00%	0	0	0.00%
Tier 2 General Service	36,265	357,874	10.13%	45,524	486,796	9.35%
Total	**$74,505**	**$532,542**	**13.99%**	**$77,496**	**$626,469**	**12.37%**

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide actuarial valuation report.

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Development of Tier 1/Tier 2 UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2014	December 31, 2013
1. Total Tier 1/Tier 2 UAL	$1,838,516	$936,178
2. Next year's Tier 1/Tier 2 UAL payment	135,423	67,760
3. Combined valuation payroll	1,207,711	1,240,344
4. Tier 1/Tier 2 UAL rate *(2. ÷ 3.)*	11.21%	5.46%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	July 1, 2015 Rates calculated as of December 31, 2013
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.99%	12.37%
b. Tier 1/Tier 2 UAL rate	11.21%	5.46%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)*	25.35%	17.98%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Adjustments Due to Rate Collar and Minimum Rate Requirements

Employer contribution rates are generally limited to change by no more than the greater of 3 percent of payroll or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 60 percent or above 140 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 60 and 70 percent or 130 and 140 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 contribution rate cannot be less than 6 percent of payroll. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2015 through June 30, 2017, develops the maximum and minimum advisory contribution rates effective July 1, 2017 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

1. Current net Tier 1/Tier 2 pension contribution rate	14.62%
2. Employer contribution rate attributable to side accounts	0.00%
3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)*	14.62%
4. Size of rate collar	
a. 20% of current employer contribution rate *(20% x 3.)*	2.92%
b. Preliminary size of rate collar *(maximum of 3% or a.)*	3.00%
c. Funded percentage	81%
d. Size of rate collar *(If c. < 60% or c. > 140%, 2 x b. If c. is 70%-130%, b. Otherwise, a graded rate between b. and 2 x b.)*	3.00%
5. Advisory July 1, 2017 minimum employer contribution rate *(3. – 4.d. but not < 0%)*	11.62%
6. Advisory July 1, 2017 maximum employer contribution rate *(3. + 4.d.)*	17.62%
7. Advisory July 1, 2017 total pension rate, before adjustment	25.35%
8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)*	(7.73%)
9. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, before collar	11.21%
10. Advisory July 1, 2017 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)*	3.48%
11. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after collar	17.62%
12. Tier 1/Tier 2 retiree healthcare rate	0.50%
13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)*	0.00%
14. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment	13.99%
15. Advisory July 1, 2017 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)*	13.99%
16. Advisory July 1, 2017 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)*	17.62%

Tier 1/Tier 2 Valuation Results

Contribution Rate Development

Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent of payroll minimum employer contribution rate.

	Advisory July 1, 2017 Rates calculated as of December 31, 2014	**July 1, 2015 Rates calculated as of December 31, 2013**
1. Tier 1/Tier 2 pension contribution rates		
a. Employer Tier 1/Tier 2 pension normal cost rate	13.99%	12.37%
b. Tier 1/Tier 2 UAL rate	3.48%	2.10%
c. Multnomah Fire District #10 rate	0.15%	0.15%
d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.50%)*	17.62%	14.62%

Data

Demographic Information

Employer Valuation Payroll

	General Service	Police & Fire	Total
Tier 1	$174,668	$0	$174,668
Tier 2	357,874	0	357,874
Tier 1/Tier 2 valuation payroll	532,542	0	532,542
OPSRP valuation payroll	675,169	0	675,169
Combined valuation payroll	**$1,207,711**	**$0**	**$1,207,711**

Employer Member Census

	December 31							
	2014				2013			
	Tier 1	Tier 2	OPSRP	Total	Tier 1	Tier 2	OPSRP	Total
Active Members [1]								
General Service	3	4	11	18	3	6	11	20
Police & Fire	0	0	0	0	0	0	0	0
Total	3	4	11	18	3	6	11	20
Active Members with previous service segments with the employer								
General Service	3	1	N/A	4	3	2	N/A	5
Police & Fire	0	0	N/A	0	0	0	N/A	0
Total	3	1	N/A	4	3	2	N/A	5
Dormant Members								
General Service	6	2	1	9	6	1	0	7
Police & Fire	0	0	0	0	0	0	0	0
Total	6	2	1	9	6	1	0	7
Retired Members and Beneficiaries								
General Service	22	1	0	23	22	1	0	23
Police & Fire	0	0	0	0	0	0	0	0
Total	22	1	0	23	22	1	0	23
Grand Total Number of Members	**34**	**8**	**12**	**54**	**34**	**10**	**11**	**55**

1 *Active counts do not include concurrent employees who have a separate dominant employer.*

Data

Demographic Information (continued)

Employer Tier 1/Tier 2 Active Members as of December 31, 2014

	Years of Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<20										
20-24										
25-29										
30-34			1							**1**
35-39										
40-44			2	1						**3**
45-49										
50-54				1		1				**2**
55-59					1					**1**
60-64										
65-69										
70-74										
75+										
Total	**0**	**0**	**3**	**2**	**1**	**1**	**0**	**0**	**0**	**7**

Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2014

Dormant Members

Age	**Count**	**Average Deferred Monthly Benefit**
<20		
20-24		
25-29		
30-34		
35-39		
40-44		
45-49	2	1,581
50-54	1	2,446
55-59	2	67
60-64	2	1,968
65-69	1	0
70-74		
75+		
Total	8	1,210

Retired Members and Beneficiaries

Age	**Count**	**Average Monthly Benefit**
<45		
45-49		
50-54		
55-59	2	1,512
60-64	7	2,541
65-69	5	2,280
70-74	2	41
75-79	2	611
80-84	2	2,126
85-89	1	622
90-94	1	2,036
95-99	1	35
100+		
Total	23	1,759

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2014 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

Actuarial cost method	Entry Age Normal.
Amortization Method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

Net investment return	7.50% compounded annually on system assets.
Interest crediting	7.50% compounded annually on members' regular account balances starting in 2015. 7.50% compounded annually on members' variable account balances starting in 2015.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.0% in 2015 to 4.4% in 2094.
Administrative Expenses	$5.5 million added to OPSRP normal cost. $33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2013 actuarial valuation are described briefly below and are described in additional detail in the system-wide actuarial valuation report.

Changes in Actuarial Methods and Valuation Procedures

- **Allocation of Liability for Service Segments**

  For allocating Tier 1/Tier 2 liability among multiple employers, the weighting between Money Match and Full Formula methodologies was updated to reflect expected future experience.

Changes in Economic Assumptions

- **Investment Return and Interest Crediting**

  The assumed investment return and interest crediting to both regular and variable account balances was reduced from 7.75% to 7.50%.

- **Inflation**

  The inflation assumption was reduced from 2.75% to 2.50%.

- **Payroll Growth**

  The assumed payroll growth rate was reduced from 3.75% to 3.50%.

- **Tier 1/Tier 2 Administrative Expenses**

  Administrative expenses for the Tier 1/Tier 2 System are assumed to be $33.0 million per year.

Changes in Demographic Assumptions

- **Mortality**

  The healthy mortality assumption is based on RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match system experience and the future projection of mortality has been changed to use mortality improvement Scale BB.

- **Disability, Retirement, and Termination**

  Rates for the disability, retirement, and termination assumptions were adjusted.

A complete summary of all assumptions used as part of the December 31, 2014 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2013 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

- The Oregon Supreme Court decision in Moro v. State of Oregon stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. As a result, PERS members who performed service both before and after the effective date will receive a blended COLA rate reflecting the differing COLA provisions applicable to each service period.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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