Milliman
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September 2016

City of Halsey/2284
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

Milliman

September 2016
City of Halsey/2284

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Halsey -- #2284

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Halsey to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for City of Halsey

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(7.15%)	(7.15%)	(7.15%)	(7.15%)	(7.15%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**12.41%**	**12.41%**	**20.09%**	**8.17%**	**12.94%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**12.91%**	**12.91%**	**20.59%**	**8.60%**	**13.37%**

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

1 *Includes Multnomah Fire District #10 rate.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

City of Halsey

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$428,520	$343,486
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(152,131)	(161,681)
Allocated pooled OPSRP UAL	31,809	24,319
Side account	0	0
Net unfunded pension actuarial accrued liability	308,198	206,124
Combined valuation payroll	223,748	212,724
Net pension UAL as a percentage of payroll	138%	97%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(7.15%)	(7.51%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,086	$1,691
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	145,007	17,778	12.44%	137,578	17,115
Total General Service		**145,007**	**17,778**		**137,578**	**17,115**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$145,007**	**$17,778**		**$137,578**	**$17,115**
Employer normal cost rate						
General Service			**12.26%**			**12.44%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**12.26%**			**12.44%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($161,681)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(6.10%)
B. Actual employer payroll	102,481
C. Payment to transition liability/(surplus)	(6,251)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(12.68%)
B. Actual employer payroll	110,448
C. Payment to transition liability/(surplus)	(13,913)
4. Supplemental payment to transition liability	0
5. Interest	(10,614)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($152,131)**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(152,131)	(161,681)
2. Combined valuation payroll	223,748	212,724
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(7.15%)**	**(7.51%)**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	223,748	212,724
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members’ variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

City of Happy Valley/2296
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

September 2016
City of Happy Valley/2296

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Happy Valley -- #2296

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Happy Valley to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for City of Happy Valley

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.00%	14.00%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**19.57%**	**19.57%**	**25.51%**	**13.59%**	**18.36%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**20.07%**	**20.07%**	**26.01%**	**14.02%**	**18.79%**

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

1 *Includes Multnomah Fire District #10 rate.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

City of Happy Valley

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	$6,861,672	$4,038,784
Allocated pre-SLGRP pooled liability/(surplus)	(588,953)	(447,620)
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	509,340	285,948
Side account	0	0
Net unfunded pension actuarial accrued liability	6,782,059	3,877,112
Combined valuation payroll	3,582,764	2,501,258
Net pension UAL as a percentage of payroll	189%	155%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.00%	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$17,397	$19,881
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$461,053	$80,915	17.89%	$0	$0
Tier 2 General Service	12.26%	942,450	115,544	12.44%	887,343	110,385
Total General Service		**1,403,503**	**196,459**		**887,343**	**110,385**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$1,403,503**	**$196,459**		**$887,343**	**$110,385**
Employer normal cost rate						
General Service			**14.00%**			**12.44%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**14.00%**			**12.44%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

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

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	3,582,764	2,501,258
3. Regular amortization factor	0.000	0.000
4. **Total transition liability/(surplus) rate**	**0.00%**	**0.00%**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	3,582,764	2,501,258
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

Harney County/2004
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

September 2016
Harney County/2004

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Harney County -- #2004

September 2016

Secondary Employers

2041 Harney District Hospital

CONTENTS

Executive Summary

Milliman has prepared this report for Harney County to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Harney County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.71%	14.63%	19.32%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(2.13%)	(2.13%)	(2.13%)	(2.13%)	(2.13%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**19.15%**	**18.07%**	**22.76%**	**11.46%**	**16.23%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**19.65%**	**18.57%**	**23.26%**	**11.89%**	**16.66%**

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.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Harney County

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$8,005,685	$6,482,617
Allocated pre-SLGRP pooled liability/(surplus)	(687,146)	(718,471)
Transition liability/(surplus)	(844,585)	(886,121)
Allocated pooled OPSRP UAL	594,260	458,973
Side account	0	0
Net unfunded pension actuarial accrued liability	7,068,214	5,336,998
Combined valuation payroll	4,180,101	4,014,748
Net pension UAL as a percentage of payroll	169%	133%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.13%)	(2.18%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$20,297	$31,912
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$535,699	$94,015	17.89%	$622,231	$111,317
Tier 2 General Service	12.26%	658,537	80,737	12.44%	803,654	99,975
Total General Service		**1,194,236**	**174,752**		**1,425,885**	**211,292**
Tier 1 Police & Fire	21.37%	54,840	11,719	21.53%	49,023	10,555
Tier 2 Police & Fire	18.95%	299,483	56,752	19.00%	278,126	52,844
Total Police & Fire		**354,323**	**68,471**		**327,149**	**63,399**
Total		**$1,548,559**	**$243,223**		**$1,753,034**	**$274,691**
Employer normal cost rate						
General Service			**14.63%**			**14.82%**
Police & Fire			**19.32%**			**19.38%**
Aggregate (Default)			**15.71%**			**15.67%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($886,121)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(2.55%)
B. Actual employer payroll	2,011,831
C. Payment to transition liability/(surplus)	(51,302)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(2.32%)
B. Actual employer payroll	2,118,956
C. Payment to transition liability/(surplus)	(49,159)
4. Supplemental payment to transition liability	0
5. Interest	(58,925)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($844,585)**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(844,585)	(886,121)
2. Combined valuation payroll	4,180,101	4,014,748
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(2.13%)**	**(2.18%)**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	4,180,101	4,014,748
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members’ variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

Harney Hospital/2855
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

September 2016
Harney Hospital/2855

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

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

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

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

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

September 2016
Harney Hospital/2855

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Harney Hospital -- #2855

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Harney Hospital to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Harney Hospital

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.15%	14.15%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(3.87%)	(3.87%)	(3.87%)	(3.87%)	(3.87%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**17.58%**	**17.58%**	**23.37%**	**11.45%**	**16.22%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.08%**	**18.08%**	**23.87%**	**11.88%**	**16.65%**

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

1 *Includes Multnomah Fire District #10 rate.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Harney Hospital

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$17,514,415	$13,574,941
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(3,361,992)	(3,653,918)
Allocated pooled OPSRP UAL	1,300,090	961,114
Side account	0	0
Net unfunded pension actuarial accrued liability	15,452,513	10,882,137
Combined valuation payroll	9,145,004	8,407,093
Net pension UAL as a percentage of payroll	169%	129%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.87%)	(4.30%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$44,405	$66,825
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$720,247	$126,403	17.89%	$797,484	$142,670
Tier 2 General Service	12.26%	1,298,441	159,189	12.44%	1,523,332	189,503
Total General Service		**2,018,688**	**285,592**		**2,320,816**	**332,173**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$2,018,688**	**$285,592**		**$2,320,816**	**$332,173**
Employer normal cost rate						
General Service			**14.15%**			**14.31%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**14.15%**			**14.31%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($3,653,918)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(7.14%)
B. Actual employer payroll	4,362,299
C. Payment to transition liability/(surplus)	(311,468)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(4.84%)
B. Actual employer payroll	4,442,483
C. Payment to transition liability/(surplus)	(215,016)
4. Supplemental payment to transition liability	0
5. Interest	(234,558)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($3,361,992)**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(3,361,992)	(3,653,918)
2. Combined valuation payroll	9,145,004	8,407,093
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(3.87%)**	**(4.30%)**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	9,145,004	8,407,093
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

City of Harrisburg/2268
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

September 2016
City of Harrisburg/2268

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Harrisburg -- #2268

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Harrisburg to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for City of Harrisburg

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.40%	13.40%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(0.91%)	(0.91%)	(0.91%)	(0.91%)	(0.91%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**18.06%**	**18.06%**	**24.60%**	**12.68%**	**17.45%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.56%**	**18.56%**	**25.10%**	**13.11%**	**17.88%**

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.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

City of Harrisburg

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$1,368,698	$897,892
Allocated pre-SLGRP pooled liability/(surplus)	(117,478)	(99,514)
Transition liability/(surplus)	(61,943)	(63,417)
Allocated pooled OPSRP UAL	101,598	63,571
Side account	0	0
Net unfunded pension actuarial accrued liability	1,290,875	798,532
Combined valuation payroll	714,654	556,073
Net pension UAL as a percentage of payroll	181%	144%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.91%)	(1.13%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,470	$4,420
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$44,098	$7,739	17.89%	$42,308	$7,569
Tier 2 General Service	12.26%	161,342	19,781	12.44%	159,792	19,878
Total General Service		**205,440**	**27,520**		**202,100**	**27,447**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$205,440**	**$27,520**		**$202,100**	**$27,447**
Employer normal cost rate						
General Service			**13.40%**			**13.58%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**13.40%**			**13.58%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($63,417)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(0.85%)
B. Actual employer payroll	307,839
C. Payment to transition liability/(surplus)	(2,617)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(0.89%)
B. Actual employer payroll	357,300
C. Payment to transition liability/(surplus)	(3,179)
4. Supplemental payment to transition liability	0
5. Interest	(4,322)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($61,943)**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(61,943)	(63,417)
2. Combined valuation payroll	714,654	556,073
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(0.91%)**	**(1.13%)**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	714,654	556,073
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

Harrisburg Fire/Rescue/2819
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

September 2016
Harrisburg Fire/Rescue/2819

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

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

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

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

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

September 2016
Harrisburg Fire/Rescue/2819

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Harrisburg Fire-Rescue -- #2819

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Harrisburg Fire/Rescue to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for Harrisburg Fire/Rescue

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(0.82%)	(0.82%)	(0.82%)	(0.82%)	(0.82%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**23.70%**	**19.56%**	**23.70%**	**12.77%**	**17.54%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**24.20%**	**20.06%**	**24.20%**	**13.20%**	**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.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

Harrisburg Fire/Rescue

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$261,578	$129,617
Allocated pre-SLGRP pooled liability/(surplus)	(22,452)	(14,365)
Transition liability/(surplus)	(10,580)	(10,626)
Allocated pooled OPSRP UAL	19,417	9,177
Side account	0	0
Net unfunded pension actuarial accrued liability	247,963	113,803
Combined valuation payroll	136,581	80,273
Net pension UAL as a percentage of payroll	182%	142%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.82%)	(1.31%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$663	$638
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	12,014	2,277	19.00%	10,693	2,032
Total Police & Fire		**12,014**	**2,277**		**10,693**	**2,032**
Total		**$12,014**	**$2,277**		**$10,693**	**$2,032**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**18.95%**			**19.00%**
Aggregate (Default)			**18.95%**			**19.00%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($10,626)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(0.52%)
B. Actual employer payroll	63,836
C. Payment to transition liability/(surplus)	(332)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(0.70%)
B. Actual employer payroll	64,574
C. Payment to transition liability/(surplus)	(452)
4. Supplemental payment to transition liability	0
5. Interest	(738)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($10,580)**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(10,580)	(10,626)
2. Combined valuation payroll	136,581	80,273
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(0.82%)**	**(1.31%)**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	136,581	80,273
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

City of Heppner/2193
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

September 2016
City of Heppner/2193

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Heppner -- #2193

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Heppner to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for City of Heppner

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(20.48%)	(20.48%)	(20.48%)	(20.48%)	(20.48%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**0.87%**	**0.00%**	**5.03%**	**0.00%**	**0.00%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**1.37%**	**0.50%**	**5.53%**	**0.43%**	**0.43%**

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

1 *Includes Multnomah Fire District #10 rate.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

City of Heppner

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$470,388	$472,886
Allocated pre-SLGRP pooled liability/(surplus)	(40,374)	(52,410)
Transition liability/(surplus)	(478,069)	(473,722)
Allocated pooled OPSRP UAL	34,917	33,481
Side account	0	0
Net unfunded pension actuarial accrued liability	(13,138)	(19,765)
Combined valuation payroll	245,609	292,863
Net pension UAL as a percentage of payroll	(5%)	(7%)
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(20.48%)	(15.99%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,193	$2,328
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$0**	**$0**		**$0**	**$0**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**15.78%**			**16.05%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($473,722)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(14.77%)
B. Actual employer payroll	140,695
C. Payment to transition liability/(surplus)	(14,942)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(16.96%)
B. Actual employer payroll	132,312
C. Payment to transition liability/(surplus)	(14,065)
4. Supplemental payment to transition liability	0
5. Interest	(33,354)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015 ***(1. - 2C. - 3C. - 4. + 5. + 6.)***	**($478,069)**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(478,069)	(473,722)
2. Combined valuation payroll	245,609	292,863
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(20.48%)**	**(15.99%)**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	245,609	292,863
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

City of Heppner/2193
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

September 2016
City of Heppner/2193

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Heppner -- #2193

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Heppner to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for City of Heppner

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(20.48%)	(20.48%)	(20.48%)	(20.48%)	(20.48%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**0.87%**	**0.00%**	**5.03%**	**0.00%**	**0.00%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**1.37%**	**0.50%**	**5.53%**	**0.43%**	**0.43%**

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

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

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

City of Heppner

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$470,388	$472,886
Allocated pre-SLGRP pooled liability/(surplus)	(40,374)	(52,410)
Transition liability/(surplus)	(478,069)	(473,722)
Allocated pooled OPSRP UAL	34,917	33,481
Side account	0	0
Net unfunded pension actuarial accrued liability	(13,138)	(19,765)
Combined valuation payroll	245,609	292,863
Net pension UAL as a percentage of payroll	(5%)	(7%)
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(20.48%)	(15.99%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,193	$2,328
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			**December 31, 2014**		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$0**	**$0**		**$0**	**$0**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**15.78%**			**16.05%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($473,722)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(14.77%)
B. Actual employer payroll	140,695
C. Payment to transition liability/(surplus)	(14,942)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(16.96%)
B. Actual employer payroll	132,312
C. Payment to transition liability/(surplus)	(14,065)
4. Supplemental payment to transition liability	0
5. Interest	(33,354)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($478,069)**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(478,069)	(473,722)
2. Combined valuation payroll	245,609	292,863
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(20.48%)**	**(15.99%)**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	245,609	292,863
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members’ variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

City of Hermiston/2160
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

Milliman

September 2016
City of Hermiston/2160

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Hermiston -- #2160

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Hermiston to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for City of Hermiston

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.76%	13.72%	19.58%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(1.33%)	(1.33%)	(1.33%)	(1.33%)	(1.33%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**21.73%**	**19.69%**	**25.55%**	**13.99%**	**18.76%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**22.23%**	**20.19%**	**26.05%**	**14.42%**	**19.19%**

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.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

City of Hermiston

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	$11,064,402	$8,355,811
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(728,571)	(756,121)
Allocated pooled OPSRP UAL	821,307	591,596
Side account	0	0
Net unfunded pension actuarial accrued liability	11,157,138	8,191,286
Combined valuation payroll	5,777,184	5,174,835
Net pension UAL as a percentage of payroll	193%	158%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.33%)	(1.44%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$28,052	$41,133
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$545,010	$95,649	17.89%	$534,988	$95,709
Tier 2 General Service	12.26%	1,431,638	175,519	12.44%	1,471,460	183,050
Total General Service		**1,976,648**	**271,168**		**2,006,448**	**278,759**
Tier 1 Police & Fire	21.37%	274,633	58,689	21.53%	255,733	55,059
Tier 2 Police & Fire	18.95%	779,485	147,712	19.00%	744,546	141,464
Total Police & Fire		**1,054,118**	**206,401**		**1,000,279**	**196,523**
Total		**$3,030,766**	**$477,569**		**$3,006,727**	**$475,282**
Employer normal cost rate						
General Service			**13.72%**			**13.89%**
Police & Fire			**19.58%**			**19.65%**
Aggregate (Default)			**15.76%**			**15.81%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($756,121)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(1.54%)
B. Actual employer payroll	2,616,136
C. Payment to transition liability/(surplus)	(40,288)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(1.36%)
B. Actual employer payroll	2,800,889
C. Payment to transition liability/(surplus)	(38,093)
4. Supplemental payment to transition liability	0
5. Interest	(50,831)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($728,571)**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(728,571)	(756,121)
2. Combined valuation payroll	5,777,184	5,174,835
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(1.33%)**	**(1.44%)**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	5,777,184	5,174,835
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

High Desert Parks & Recreation District/2838
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

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

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

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

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

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

September 2016
High Desert Parks & Recreation District/2838

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

High Desert Parks & Recreation District -- #2838

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for High Desert Parks & Recreation District to:

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

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

Executive Summary

Employer Contribution Rates

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

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

Employer Rates Effective July 1, 2017 for High Desert Parks & Recreation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	0.42%	0.42%	0.42%	0.42%	0.42%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**21.77%**	**20.80%**	**25.93%**	**14.01%**	**18.78%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**22.27%**	**21.30%**	**26.43%**	**14.44%**	**19.21%**

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

1 *Includes Multnomah Fire District #10 rate.*

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

Executive Summary

Employer Contribution Rates (continued)

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

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

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

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

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

Executive Summary

Accounting Information

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

Pension

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

Executive Summary

Accounting Information (continued)

Retiree Healthcare

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

Contractually Required Contribution Rate

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

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

Executive Summary

Principal Valuation Results

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

High Desert Parks & Recreation District

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$48,472	$10,775
Allocated pre-SLGRP pooled liability/(surplus)	(4,160)	(1,194)
Transition liability/(surplus)	1,001	1,023
Allocated pooled OPSRP UAL	3,598	763
Side account	0	0
Net unfunded pension actuarial accrued liability	48,911	11,367
Combined valuation payroll	25,309	6,673
Net pension UAL as a percentage of payroll	193%	170%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.42%	1.52%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$123	$53
Allocated pooled RHIPA UAL	$0	$0

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

Executive Summary

Principal Valuation Results (continued)

SLGRP

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

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

Executive Summary

Principal Valuation Results (continued)

OPSRP

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

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

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

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

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

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

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

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

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

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$0**	**$0**		**$0**	**$0**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**15.78%**			**16.05%**

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

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

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

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$1,023
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	0.39%
B. Actual employer payroll	10,500
C. Payment to transition liability/(surplus)	41
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	0.39%
B. Actual employer payroll	13,125
C. Payment to transition liability/(surplus)	51
4. Supplemental payment to transition liability	0
5. Interest	70
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$1,001**

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

Development of Transition Liability or Surplus Rate

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

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,001	1,023
2. Combined valuation payroll	25,309	6,673
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**0.42%**	**1.52%**

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

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

Side Account Information

Side Account Balances

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

Development of Side Account Rate

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

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	25,309	6,673
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

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

Brief Summary of Actuarial Methods and Assumptions

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

Actuarial Methods and Valuation Procedures

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

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

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

Changes in Assumptions

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

Brief Summary of Changes in Plan Provisions

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

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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

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September 2016

City of Hines/2226
Oregon Public Employees Retirement System

Dear Sir or Madam:

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

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

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

Contents of Report

The executive summary provides the basic information you need including:

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

The remainder of the report provides additional information including:

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

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

September 2016
City of Hines/2226

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

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

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

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

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

September 2016
City of Hines/2226

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Hines -- #2226

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Hines to:

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

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Hines.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Hines

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(1.32%)	(1.32%)	(1.32%)	(1.32%)	(1.32%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**16.51%**	**16.51%**	**24.19%**	**12.27%**	**17.04%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**17.01%**	**17.01%**	**24.69%**	**12.70%**	**17.47%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Hines

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$559,412	$677,403
Allocated pre-SLGRP pooled liability/(surplus)	(48,016)	(75,077)
Transition liability/(surplus)	(36,765)	(37,786)
Allocated pooled OPSRP UAL	41,525	47,960
Side account	0	0
Net unfunded pension actuarial accrued liability	516,156	612,500
Combined valuation payroll	292,092	419,522
Net pension UAL as a percentage of payroll	177%	146%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.32%)	(0.89%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,418	$3,335
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$54,034	$9,667
Tier 2 General Service	12.26%	60,730	7,445	12.44%	61,044	7,594
Total General Service		**60,730**	**7,445**		**115,078**	**17,261**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$60,730**	**$7,445**		**$115,078**	**$17,261**
Employer normal cost rate						
General Service			**12.26%**			**15.00%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**12.26%**			**15.00%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($37,786)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(1.06%)
B. Actual employer payroll	193,546
C. Payment to transition liability/(surplus)	(2,052)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(1.01%)
B. Actual employer payroll	151,892
C. Payment to transition liability/(surplus)	(1,534)
4. Supplemental payment to transition liability	0
5. Interest	(2,565)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($36,765)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(36,765)	(37,786)
2. Combined valuation payroll	292,092	419,522
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(1.32%)**	**(0.89%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	292,092	419,522
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Hood River/2138
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
City of Hood River/2138

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Hood River -- #2138

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Hood River to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Hood River.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Hood River

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.18%	14.98%	19.90%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(1.04%)	(1.04%)	(1.04%)	(1.04%)	(1.04%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**22.71%**	**19.51%**	**24.43%**	**12.55%**	**17.32%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**23.21%**	**20.01%**	**24.93%**	**12.98%**	**17.75%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Hood River

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$7,826,464	$6,415,867
Allocated pre-SLGRP pooled liability/(surplus)	(671,763)	(711,073)
Transition liability/(surplus)	(403,709)	(419,142)
Allocated pooled OPSRP UAL	580,956	454,247
Side account	0	0
Net unfunded pension actuarial accrued liability	7,331,948	5,739,899
Combined valuation payroll	4,086,522	3,973,409
Net pension UAL as a percentage of payroll	179%	144%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.04%)	(1.04%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$19,843	$31,583
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$444,549	$78,018	17.89%	$441,864	$79,049
Tier 2 General Service	12.26%	420,651	51,572	12.44%	401,376	49,931
Total General Service		**865,200**	**129,590**		**843,240**	**128,980**
Tier 1 Police & Fire	21.37%	629,139	134,447	21.53%	632,802	136,242
Tier 2 Police & Fire	18.95%	975,752	184,905	19.00%	973,539	184,972
Total Police & Fire		**1,604,891**	**319,352**		**1,606,341**	**321,214**
Total		**$2,470,091**	**$448,942**		**$2,449,581**	**$450,194**
Employer normal cost rate						
General Service			**14.98%**			**15.30%**
Police & Fire			**19.90%**			**20.00%**
Aggregate (Default)			**18.18%**			**18.38%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($419,142)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(1.10%)
B. Actual employer payroll	1,876,121
C. Payment to transition liability/(surplus)	(20,637)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(1.15%)
B. Actual employer payroll	1,996,684
C. Payment to transition liability/(surplus)	(22,962)
4. Supplemental payment to transition liability	0
5. Interest	(28,166)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($403,709)**

[1] Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(403,709)	(419,142)
2. Combined valuation payroll	4,086,522	3,973,409
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(1.04%)**	**(1.04%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	4,086,522	3,973,409
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Hood River County/2035
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Hood River County/2035

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Hood River County/2035

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Hood River County -- #2035

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Hood River County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Hood River County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Hood River County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.52%	14.55%	20.02%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(4.43%)	(4.43%)	(4.43%)	(4.43%)	(4.43%)
Side account rate relief [2]	(7.81%)	(7.81%)	(7.81%)	(7.81%)	(7.81%)
Net pension contribution rate	**10.58%**	**9.61%**	**15.08%**	**3.08%**	**7.85%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**11.08%**	**10.11%**	**15.58%**	**3.51%**	**8.28%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Hood River County

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$13,192,723	$11,000,121
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(2,899,476)	(2,967,996)
Allocated pooled OPSRP UAL	979,292	778,815
Side account	5,115,286	5,479,500
Net unfunded pension actuarial accrued liability	6,157,253	3,331,440
Combined valuation payroll	6,888,469	6,812,482
Net pension UAL as a percentage of payroll	89%	49%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.43%)	(4.31%)
Side account rate relief	(7.81%)	(7.95%)
Allocated pooled RHIA UAL	$33,448	$54,150
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$1,501,943	$263,591	17.89%	$1,566,151	$280,184
Tier 2 General Service	12.26%	1,969,834	241,502	12.44%	2,118,794	263,578
Total General Service		**3,471,777**	**505,093**		**3,684,945**	**543,762**
Tier 1 Police & Fire	21.37%	331,218	70,781	21.53%	332,422	71,570
Tier 2 Police & Fire	18.95%	419,625	79,519	19.00%	407,162	77,361
Total Police & Fire		**750,843**	**150,300**		**739,584**	**148,931**
Total		**$4,222,620**	**$655,393**		**$4,424,529**	**$692,693**
Employer normal cost rate						
General Service			**14.55%**			**14.76%**
Police & Fire			**20.02%**			**20.14%**
Aggregate (Default)			**15.52%**			**15.66%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($2,967,996)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(3.92%)
B. Actual employer payroll	3,268,289
C. Payment to transition liability/(surplus)	(128,117)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(4.25%)
B. Actual employer payroll	3,357,483
C. Payment to transition liability/(surplus)	(142,692)
4. Supplemental payment to transition liability	0
5. Interest	(202,289)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($2,899,476)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,899,476)	(2,967,996)
2. Combined valuation payroll	6,888,469	6,812,482
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(4.43%)**	**(4.31%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**	**$5,479,500**	**$5,479,500**
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(476,796)	(476,796)
5. Side account earnings during 2015		113,583	113,583
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***		**$5,115,286**	**$5,115,286**

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	$5,115,286	$5,479,500
Side Account 2	0	0
Side Account 3	0	0
Total	**$5,115,286**	**$5,479,500**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$5,115,286	$5,479,500
2. Combined valuation payroll	6,888,469	6,812,482
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(7.81%)	(7.95%)

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Hoodland Fire District #74/2607
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Hoodland Fire District #74/2607

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Hoodland Fire District #74/2607

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Hoodland Fire District #74 -- #2607

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Hoodland Fire District #74 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Hoodland Fire District #74.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Hoodland Fire District #74

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.94%	12.26%	20.90%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(1.76%)	(1.76%)	(1.76%)	(1.76%)	(1.76%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**23.75%**	**16.07%**	**24.71%**	**11.83%**	**16.60%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**24.25%**	**16.57%**	**25.21%**	**12.26%**	**17.03%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Hoodland Fire District #74

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$1,757,238	$1,248,832
Allocated pre-SLGRP pooled liability/(surplus)	(150,828)	(138,409)
Transition liability/(surplus)	(153,042)	(161,656)
Allocated pooled OPSRP UAL	130,439	88,418
Side account	0	0
Net unfunded pension actuarial accrued liability	1,583,807	1,037,185
Combined valuation payroll	917,527	773,414
Net pension UAL as a percentage of payroll	173%	134%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.76%)	(2.07%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$4,455	$6,148
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	56,522	6,930	12.44%	58,531	7,281
Total General Service		**56,522**	**6,930**		**58,531**	**7,281**
Tier 1 Police & Fire	21.37%	364,275	77,846	21.53%	340,078	73,219
Tier 2 Police & Fire	18.95%	88,154	16,705	19.00%	81,578	15,500
Total Police & Fire		**452,429**	**94,551**		**421,656**	**88,719**
Total		**$508,951**	**$101,481**		**$480,187**	**$96,000**
Employer normal cost rate						
General Service			**12.26%**			**12.44%**
Police & Fire			**20.90%**			**21.04%**
Aggregate (Default)			**19.94%**			**19.99%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($161,656)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(2.26%)
B. Actual employer payroll	460,546
C. Payment to transition liability/(surplus)	(10,408)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(1.75%)
B. Actual employer payroll	507,561
C. Payment to transition liability/(surplus)	(8,883)
4. Supplemental payment to transition liability	0
5. Interest	(10,677)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($153,042)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(153,042)	(161,656)
2. Combined valuation payroll	917,527	773,414
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(1.76%)**	**(2.07%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	917,527	773,414
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Horsefly Irrigation District/2510
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Horsefly Irrigation District/2510

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Horsefly Irrigation District -- #2510

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Horsefly Irrigation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Horsefly Irrigation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Horsefly Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	6.96%	6.96%	6.96%	6.96%	6.96%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**30.04%**	**29.07%**	**34.20%**	**22.28%**	**27.05%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**30.54%**	**29.57%**	**34.70%**	**22.71%**	**27.48%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Horsefly Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$110,135	$101,762
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	38,065	47,657
Allocated pooled OPSRP UAL	8,175	7,205
Side account	0	0
Net unfunded pension actuarial accrued liability	156,375	156,624
Combined valuation payroll	57,506	63,022
Net pension UAL as a percentage of payroll	272%	249%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	6.96%	7.47%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$279	$501
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$0**	**$0**		**$0**	**$0**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**15.78%**			**16.05%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$47,657
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	8.91%
B. Actual employer payroll	29,775
C. Payment to transition liability/(surplus)	2,653
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	32.83%
B. Actual employer payroll	29,225
C. Payment to transition liability/(surplus)	9,595
4. Supplemental payment to transition liability	0
5. Interest	2,656
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$38,065**

[1] Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	38,065	47,657
2. Combined valuation payroll	57,506	63,022
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**6.96%**	**7.47%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	57,506	63,022
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Housing Authority of Jackson County/2773
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
Housing Authority of Jackson County/2773

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Housing Authority of Jackson County -- #2773

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Housing Authority of Jackson County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Housing Authority of Jackson County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Housing Authority of Jackson County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.24%	13.24%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	1.67%	1.67%	1.67%	1.67%	1.67%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**20.48%**	**20.48%**	**27.18%**	**15.26%**	**20.03%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**20.98%**	**20.98%**	**27.68%**	**15.69%**	**20.46%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Housing Authority of Jackson County

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$5,126,884	$4,220,340
Allocated pre-SLGRP pooled liability/(surplus)	(440,052)	(467,742)
Transition liability/(surplus)	424,676	440,688
Allocated pooled OPSRP UAL	380,567	298,803
Side account	0	0
Net unfunded pension actuarial accrued liability	5,492,075	4,492,089
Combined valuation payroll	2,676,959	2,613,698
Net pension UAL as a percentage of payroll	205%	172%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.67%	1.67%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$12,998	$20,775
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$219,722	$38,561	17.89%	$330,994	$59,215
Tier 2 General Service	12.26%	963,575	118,134	12.44%	1,044,922	129,988
Total General Service		**1,183,297**	**156,695**		**1,375,916**	**189,203**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$1,183,297**	**$156,695**		**$1,375,916**	**$189,203**
Employer normal cost rate						
General Service			**13.24%**			**13.75%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**13.24%**			**13.75%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$440,688
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	1.83%
B. Actual employer payroll	1,270,995
C. Payment to transition liability/(surplus)	23,259
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	1.68%
B. Actual employer payroll	1,332,248
C. Payment to transition liability/(surplus)	22,382
4. Supplemental payment to transition liability	0
5. Interest	29,629
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$424,676**

[1] Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	424,676	440,688
2. Combined valuation payroll	2,676,959	2,613,698
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**1.67%**	**1.67%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	2,676,959	2,613,698
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Hubbard/2196
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

Milliman

September 2016
City of Hubbard/2196

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
City of Hubbard/2196

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Hubbard -- #2196

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Hubbard to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Hubbard.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Hubbard

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.22%	16.57%	20.61%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(0.17%)	(0.17%)	(0.17%)	(0.17%)	(0.17%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**25.35%**	**23.70%**	**27.74%**	**15.15%**	**19.92%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**25.85%**	**24.20%**	**28.24%**	**15.58%**	**20.35%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Hubbard

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$1,273,666	$1,114,815
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(10,678)	(10,901)
Allocated pooled OPSRP UAL	94,544	78,930
Side account	0	0
Net unfunded pension actuarial accrued liability	1,357,532	1,182,844
Combined valuation payroll	665,034	690,416
Net pension UAL as a percentage of payroll	204%	171%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(0.17%)	(0.16%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,229	$5,488
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$202,653	$35,566	17.89%	$195,786	$35,026
Tier 2 General Service	12.26%	46,277	5,674	12.44%	44,421	5,526
Total General Service		**248,930**	**41,240**		**240,207**	**40,552**
Tier 1 Police & Fire	21.37%	117,818	25,178	21.53%	117,547	25,308
Tier 2 Police & Fire	18.95%	54,237	10,278	19.00%	59,094	11,228
Total Police & Fire		**172,055**	**35,456**		**176,641**	**36,536**
Total		**$420,985**	**$76,696**		**$416,848**	**$77,088**
Employer normal cost rate						
General Service			**16.57%**			**16.88%**
Police & Fire			**20.61%**			**20.68%**
Aggregate (Default)			**18.22%**			**18.49%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($10,901)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(0.13%)
B. Actual employer payroll	333,437
C. Payment to transition liability/(surplus)	(433)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(0.15%)
B. Actual employer payroll	355,781
C. Payment to transition liability/(surplus)	(535)
4. Supplemental payment to transition liability	0
5. Interest	(745)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($10,678)**

[1] Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(10,678)	(10,901)
2. Combined valuation payroll	665,034	690,416
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(0.17%)**	**(0.16%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	665,034	690,416
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Hubbard Rural Fire Protection District/2829
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
Hubbard Rural Fire Protection District/2829

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Hubbard Rural Fire Protection District -- #2829

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Hubbard Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Hubbard Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Hubbard Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.38%	14.81%	21.38%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(326.86%)	(326.86%)	(326.86%)	(326.86%)	(326.86%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Hubbard Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$4,370	$0
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(70,890)	(66,202)
Allocated pooled OPSRP UAL	324	0
Side account	0	0
Net unfunded pension actuarial accrued liability	(66,196)	(66,202)
Combined valuation payroll	2,282	0
Net pension UAL as a percentage of payroll	(2,901%)	0%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(326.86%)	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$11	$0
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	2,282	488	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**2,282**	**488**		**0**	**0**
Total		**$2,282**	**$488**		**$0**	**$0**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**21.38%**			**20.08%**
Aggregate (Default)			**21.38%**			**16.05%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($66,202)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(13.12%)
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(11.78%)
B. Actual employer payroll	2,188
C. Payment to transition liability/(surplus)	(258)
4. Supplemental payment to transition liability	0
5. Interest	(4,946)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($70,890)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(70,890)	(66,202)
2. Combined valuation payroll	2,282	0
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(326.86%)**	**0.00%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	2,282	0
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Huntington/2191
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
City of Huntington/2191

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Huntington -- #2191

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Huntington to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Huntington.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Huntington

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	28.74%	28.74%	28.74%	28.74%	28.74%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**50.09%**	**49.12%**	**54.25%**	**42.33%**	**47.10%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**50.59%**	**49.62%**	**54.75%**	**42.76%**	**47.53%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Huntington

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$223,725	$185,608
Allocated pre-SLGRP pooled liability/(surplus)	(19,203)	(20,571)
Transition liability/(surplus)	319,111	336,072
Allocated pooled OPSRP UAL	16,607	13,141
Side account	0	0
Net unfunded pension actuarial accrued liability	540,240	514,250
Combined valuation payroll	116,816	114,949
Net pension UAL as a percentage of payroll	462%	447%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	28.74%	28.90%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$567	$914
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2015	December 31, 2014
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions) RHIPA	Actuarial Valuation as of December 31, 2015	December 31, 2014
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$0**	**$0**		**$0**	**$0**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**15.78%**			**16.05%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$336,072
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	37.38%
B. Actual employer payroll	53,039
C. Payment to transition liability/(surplus)	19,826
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	33.54%
B. Actual employer payroll	57,838
C. Payment to transition liability/(surplus)	19,399
4. Supplemental payment to transition liability	0
5. Interest	22,264
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$319,111**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	319,111	336,072
2. Combined valuation payroll	116,816	114,949
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**28.74%**	**28.90%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	116,816	114,949
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Illinois Valley Fire District/2564
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Illinois Valley Fire District/2564

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Illinois Valley Fire District -- #2564

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Illinois Valley Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Illinois Valley Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Illinois Valley Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(9.31%)	(9.31%)	(9.31%)	(9.31%)	(9.31%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**16.94%**	**12.80%**	**16.94%**	**6.01%**	**10.78%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**17.44%**	**13.30%**	**17.44%**	**6.44%**	**11.21%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Illinois Valley Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	$834,820	$704,991
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(434,371)	(453,176)
Allocated pooled OPSRP UAL	61,968	49,914
Side account	0	0
Net unfunded pension actuarial accrued liability	462,417	301,729
Combined valuation payroll	435,894	436,608
Net pension UAL as a percentage of payroll	106%	69%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(9.31%)	(9.20%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,117	$3,470
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2015	December 31, 2014
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions) RHIPA	Actuarial Valuation as of December 31, 2015	December 31, 2014
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	74,710	14,158	19.00%	73,892	14,039
Total Police & Fire		**74,710**	**14,158**		**73,892**	**14,039**
Total		**$74,710**	**$14,158**		**$73,892**	**$14,039**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**18.95%**			**19.00%**
Aggregate (Default)			**18.95%**			**19.00%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($453,176)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(15.23%)
B. Actual employer payroll	194,160
C. Payment to transition liability/(surplus)	(27,100)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(10.54%)
B. Actual employer payroll	208,819
C. Payment to transition liability/(surplus)	(22,010)
4. Supplemental payment to transition liability	0
5. Interest	(30,305)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($434,371)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(434,371)	(453,176)
2. Combined valuation payroll	435,894	436,608
3. Regular amortization factor	10.709	11.278
4. **Total transition liability/(surplus) rate**	**(9.31%)**	**(9.20%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	435,894	436,608
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Imbler Rural Fire Protection District/2651
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Imbler Rural Fire Protection District/2651

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Imbler Rural Fire Protection District -- #2651

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Imbler Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Imbler Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Imbler Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.37%	14.81%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	0.43%	0.43%	0.43%	0.43%	0.43%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**27.37%**	**20.81%**	**27.37%**	**14.02%**	**18.79%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**27.87%**	**21.31%**	**27.87%**	**14.45%**	**19.22%**

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.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Imbler Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$55,887	$44,122
Allocated pre-SLGRP pooled liability/(surplus)	(4,797)	(4,890)
Transition liability/(surplus)	1,192	1,510
Allocated pooled OPSRP UAL	4,148	3,124
Side account	0	0
Net unfunded pension actuarial accrued liability	56,430	43,866
Combined valuation payroll	29,181	27,325
Net pension UAL as a percentage of payroll	193%	161%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.43%	0.55%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$142	$217
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	10,603	2,266	21.53%	10,604	2,283
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**10,603**	**2,266**		**10,604**	**2,283**
Total		**$10,603**	**$2,266**		**$10,604**	**$2,283**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**21.37%**			**21.53%**
Aggregate (Default)			**21.37%**			**21.53%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$1,510
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	2.34%
B. Actual employer payroll	13,026
C. Payment to transition liability/(surplus)	305
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	0.65%
B. Actual employer payroll	14,825
C. Payment to transition liability/(surplus)	96
4. Supplemental payment to transition liability	0
5. Interest	83
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$1,192**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,192	1,510
2. Combined valuation payroll	29,181	27,325
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**0.43%**	**0.55%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	29,181	27,325
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members’ variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Independence/2267
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
City of Independence/2267

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Independence -- #2267

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Independence to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Independence.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Independence

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.62%	15.82%	20.47%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(2.59%)	(2.59%)	(2.59%)	(2.59%)	(2.59%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**20.60%**	**18.80%**	**23.45%**	**11.00%**	**15.77%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**21.10%**	**19.30%**	**23.95%**	**11.43%**	**16.20%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	**70% to 130%**	**Under 60% or Over 140%**
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Independence

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$5,121,967	$4,057,107
Allocated pre-SLGRP pooled liability/(surplus)	(439,630)	(449,651)
Transition liability/(surplus)	(657,484)	(683,068)
Allocated pooled OPSRP UAL	380,202	287,246
Side account	0	0
Net unfunded pension actuarial accrued liability	4,405,055	3,211,634
Combined valuation payroll	2,674,392	2,512,606
Net pension UAL as a percentage of payroll	165%	128%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.59%)	(2.69%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$12,986	$19,972
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$501,267	$87,972	17.89%	$477,565	$85,436
Tier 2 General Service	12.26%	242,810	29,769	12.44%	236,863	29,466
Total General Service		**744,077**	**117,741**		**714,428**	**114,902**
Tier 1 Police & Fire	21.37%	292,953	62,604	21.53%	444,623	95,727
Tier 2 Police & Fire	18.95%	174,656	33,097	19.00%	166,684	31,670
Total Police & Fire		**467,609**	**95,701**		**611,307**	**127,397**
Total		**$1,211,686**	**$213,442**		**$1,325,735**	**$242,299**
Employer normal cost rate						
General Service			**15.82%**			**16.08%**
Police & Fire			**20.47%**			**20.84%**
Aggregate (Default)			**17.62%**			**18.28%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($683,068)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(2.57%)
B. Actual employer payroll	1,268,371
C. Payment to transition liability/(surplus)	(32,597)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(2.88%)
B. Actual employer payroll	1,349,235
C. Payment to transition liability/(surplus)	(38,858)
4. Supplemental payment to transition liability	0
5. Interest	(45,871)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($657,484)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(657,484)	(683,068)
2. Combined valuation payroll	2,674,392	2,512,606
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(2.59%)**	**(2.69%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	2,674,392	2,512,606
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Irrigon/2266
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
City of Irrigon/2266

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Irrigon -- #2266

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Irrigon to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Irrigon.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Irrigon

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.77%	13.77%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(1.43%)	(1.43%)	(1.43%)	(1.43%)	(1.43%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**17.91%**	**17.91%**	**24.08%**	**12.16%**	**16.93%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.41%**	**18.41%**	**24.58%**	**12.59%**	**17.36%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Irrigon

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$881,200	$743,817
Allocated pre-SLGRP pooled liability/(surplus)	(75,635)	(82,437)
Transition liability/(surplus)	(62,384)	(64,439)
Allocated pooled OPSRP UAL	65,411	52,663
Side account	0	0
Net unfunded pension actuarial accrued liability	808,592	649,604
Combined valuation payroll	460,111	460,653
Net pension UAL as a percentage of payroll	176%	141%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.43%)	(1.38%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,234	$3,662
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

1 *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$78,781	$13,826	17.89%	$79,704	$14,259
Tier 2 General Service	12.26%	196,624	24,106	12.44%	195,212	24,284
Total General Service		**275,405**	**37,932**		**274,916**	**38,543**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$275,405**	**$37,932**		**$274,916**	**$38,543**
Employer normal cost rate						
General Service			**13.77%**			**14.02%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**13.77%**			**14.02%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($64,439)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(1.40%)
B. Actual employer payroll	224,558
C. Payment to transition liability/(surplus)	(3,144)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(1.48%)
B. Actual employer payroll	220,475
C. Payment to transition liability/(surplus)	(3,263)
4. Supplemental payment to transition liability	0
5. Interest	(4,352)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($62,384)**

[1] Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(62,384)	(64,439)
2. Combined valuation payroll	460,111	460,653
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(1.43%)**	**(1.38%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	460,111	460,653
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Jackson County Fire District #3/2715
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Jackson County Fire District #3/2715

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Jackson County Fire District #3 -- #2715

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Jackson County Fire District #3 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Jackson County Fire District #3.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Jackson County Fire District #3

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.52%	12.26%	19.78%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(5.68%)	(5.68%)	(5.68%)	(5.68%)	(5.68%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**19.41%**	**12.15%**	**19.67%**	**7.91%**	**12.68%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**19.91%**	**12.65%**	**20.17%**	**8.34%**	**13.11%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Jackson County Fire District #3

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$12,887,699	$10,155,713
Allocated pre-SLGRP pooled liability/(surplus)	(1,106,181)	(1,125,561)
Transition liability/(surplus)	(3,630,277)	(3,772,197)
Allocated pooled OPSRP UAL	956,650	719,030
Side account	0	0
Net unfunded pension actuarial accrued liability	9,107,891	5,976,985
Combined valuation payroll	6,729,203	6,289,532
Net pension UAL as a percentage of payroll	135%	95%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.68%)	(5.93%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$32,675	$49,993
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	129,205	15,841	12.44%	129,292	16,084
Total General Service		**129,205**	**15,841**		**129,292**	**16,084**
Tier 1 Police & Fire	21.37%	1,225,768	261,947	21.53%	1,190,258	256,263
Tier 2 Police & Fire	18.95%	2,330,429	441,616	19.00%	2,344,221	445,402
Total Police & Fire		**3,556,197**	**703,563**		**3,534,479**	**701,665**
Total		**$3,685,402**	**$719,404**		**$3,663,771**	**$717,749**
Employer normal cost rate						
General Service			**12.26%**			**12.44%**
Police & Fire			**19.78%**			**19.85%**
Aggregate (Default)			**19.52%**			**19.59%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($3,772,197)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(6.94%)
B. Actual employer payroll	3,033,384
C. Payment to transition liability/(surplus)	(210,517)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(5.82%)
B. Actual employer payroll	3,173,166
C. Payment to transition liability/(surplus)	(184,678)
4. Supplemental payment to transition liability	0
5. Interest	(253,275)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($3,630,277)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(3,630,277)	(3,772,197)
2. Combined valuation payroll	6,729,203	6,289,532
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(5.68%)**	**(5.93%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	6,729,203	6,289,532
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Jackson County Fire District #4/2620
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Jackson County Fire District #4/2620

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Jackson County Fire District #4 -- #2620

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Jackson County Fire District #4 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Jackson County Fire District #4.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Jackson County Fire District #4

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.37%	14.81%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**28.67%**	**22.11%**	**28.67%**	**15.32%**	**20.09%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**29.17%**	**22.61%**	**29.17%**	**15.75%**	**20.52%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Jackson County Fire District #4

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$580,400	$440,907
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	43,083	31,216
Side account	0	0
Net unfunded pension actuarial accrued liability	623,483	472,123
Combined valuation payroll	303,051	273,058
Net pension UAL as a percentage of payroll	206%	173%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,472	$2,170
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions) **RHIA**	Actuarial Valuation as of **December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions) **RHIPA**	Actuarial Valuation as of **December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	195,910	41,866	21.53%	183,601	39,529
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**195,910**	**41,866**		**183,601**	**39,529**
Total		**$195,910**	**$41,866**		**$183,601**	**$39,529**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**21.37%**			**21.53%**
Aggregate (Default)			**21.37%**			**21.53%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$0**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	303,051	273,058
3. Regular amortization factor	0.000	0.000
4. **Total transition liability/(surplus) rate**	**0.00%**	**0.00%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	303,051	273,058
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Jackson County Vector Control District/2541
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Jackson County Vector Control District/2541

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Jackson County Vector Control District -- #2541

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Jackson County Vector Control District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Jackson County Vector Control District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Jackson County Vector Control District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(3.66%)	(3.66%)	(3.66%)	(3.66%)	(3.66%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**19.42%**	**18.45%**	**23.58%**	**11.66%**	**16.43%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**19.92%**	**18.95%**	**24.08%**	**12.09%**	**16.86%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Jackson County Vector Control District

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$365,673	$133,077
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(66,435)	(65,773)
Allocated pooled OPSRP UAL	27,144	9,422
Side account	0	0
Net unfunded pension actuarial accrued liability	326,382	76,726
Combined valuation payroll	190,933	82,416
Net pension UAL as a percentage of payroll	171%	93%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.66%)	(7.89%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$927	$655
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$0**	**$0**		**$0**	**$0**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**15.78%**			**16.05%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($65,773)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(2.82%)
B. Actual employer payroll	43,676
C. Payment to transition liability/(surplus)	(1,232)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(3.15%)
B. Actual employer payroll	87,031
C. Payment to transition liability/(surplus)	(2,741)
4. Supplemental payment to transition liability	0
5. Interest	(4,635)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($66,435)**

[1] Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(66,435)	(65,773)
2. Combined valuation payroll	190,933	82,416
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(3.66%)**	**(7.89%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	190,933	82,416
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Jefferson/2211
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
City of Jefferson/2211

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Jefferson -- #2211

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Jefferson to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Jefferson.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Jefferson

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.20%	15.20%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(47.13%)	(47.13%)	(47.13%)	(47.13%)	(47.13%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Jefferson

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$568,949	$598,780
Allocated pre-SLGRP pooled liability/(surplus)	(48,834)	(66,363)
Transition liability/(surplus)	(1,330,632)	(1,284,063)
Allocated pooled OPSRP UAL	42,233	42,394
Side account	0	0
Net unfunded pension actuarial accrued liability	(768,284)	(709,252)
Combined valuation payroll	297,072	370,830
Net pension UAL as a percentage of payroll	(259%)	(191%)
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(47.13%)	(34.22%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,442	$2,948
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$104,546	$18,348	17.89%	$143,149	$25,609
Tier 2 General Service	12.26%	83,764	10,269	12.44%	97,277	12,101
Total General Service		**188,310**	**28,617**		**240,426**	**37,710**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$188,310**	**$28,617**		**$240,426**	**$37,710**
Employer normal cost rate						
General Service			**15.20%**			**15.68%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**15.20%**			**15.68%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($1,284,063)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(11.54%)
B. Actual employer payroll	198,969
C. Payment to transition liability/(surplus)	(22,360)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(17.09%)
B. Actual employer payroll	162,822
C. Payment to transition liability/(surplus)	(23,906)
4. Supplemental payment to transition liability	0
5. Interest	(92,835)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($1,330,632)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,330,632)	(1,284,063)
2. Combined valuation payroll	297,072	370,830
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(47.13%)**	**(34.22%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	297,072	370,830
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Jefferson County EMS/2712
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
Jefferson County EMS/2712

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

ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Jefferson County EMS -- #2712

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson County EMS to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Jefferson County EMS.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Jefferson County EMS

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	0.38%	0.38%	0.38%	0.38%	0.38%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**18.21%**	**18.21%**	**25.89%**	**13.97%**	**18.74%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**18.71%**	**18.71%**	**26.39%**	**14.40%**	**19.17%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	**70% to 130%**	**Under 60% or Over 140%**
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Jefferson County EMS

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$860,249	$605,707
Allocated pre-SLGRP pooled liability/(surplus)	(73,837)	(67,131)
Transition liability/(surplus)	16,339	17,241
Allocated pooled OPSRP UAL	63,856	42,884
Side account	0	0
Net unfunded pension actuarial accrued liability	866,607	598,701
Combined valuation payroll	449,172	375,120
Net pension UAL as a percentage of payroll	193%	160%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.38%	0.45%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,181	$2,982
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	159,882	19,602	12.44%	169,790	21,122
Total General Service		**159,882**	**19,602**		**169,790**	**21,122**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$159,882**	**$19,602**		**$169,790**	**$21,122**
Employer normal cost rate						
General Service			**12.26%**			**12.44%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**12.26%**			**12.44%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$17,241
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	0.45%
B. Actual employer payroll	173,002
C. Payment to transition liability/(surplus)	779
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	0.63%
B. Actual employer payroll	200,523
C. Payment to transition liability/(surplus)	1,263
4. Supplemental payment to transition liability	0
5. Interest	1,140
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$16,339**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	16,339	17,241
2. Combined valuation payroll	449,172	375,120
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**0.38%**	**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, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	449,172	375,120
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Jefferson County Library District/2846
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
Jefferson County Library District/2846

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Jefferson County Library District -- #2846

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson County Library District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Jefferson County Library District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Jefferson County Library District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.86%	12.86%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(0.69%)	(0.69%)	(0.69%)	(0.69%)	(0.69%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**19.47%**	**19.47%**	**26.55%**	**14.63%**	**19.40%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**19.97%**	**19.97%**	**27.05%**	**15.06%**	**19.83%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Jefferson County Library District

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$362,612	$266,185
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(12,384)	(12,519)
Allocated pooled OPSRP UAL	26,917	18,846
Side account	0	0
Net unfunded pension actuarial accrued liability	377,145	272,512
Combined valuation payroll	189,335	164,851
Net pension UAL as a percentage of payroll	199%	165%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(0.69%)	(0.75%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$919	$1,310
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$10,975	$1,926	17.89%	$11,104	$1,987
Tier 2 General Service	12.26%	85,204	10,446	12.44%	83,042	10,330
Total General Service		**96,179**	**12,372**		**94,146**	**12,317**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$96,179**	**$12,372**		**$94,146**	**$12,317**
Employer normal cost rate						
General Service			**12.86%**			**13.08%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**12.86%**			**13.08%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($12,519)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(0.51%)
B. Actual employer payroll	84,118
C. Payment to transition liability/(surplus)	(429)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(0.62%)
B. Actual employer payroll	91,943
C. Payment to transition liability/(surplus)	(570)
4. Supplemental payment to transition liability	0
5. Interest	(864)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($12,384)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(12,384)	(12,519)
2. Combined valuation payroll	189,335	164,851
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(0.69%)**	**(0.75%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	189,335	164,851
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Jefferson Rural Fire Protection District/2561
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Jefferson Rural Fire Protection District/2561

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Jefferson Rural Fire Protection District -- #2561

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Jefferson Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Jefferson Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Jefferson Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.59%	17.55%	20.22%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(10.92%)	(10.92%)	(10.92%)	(10.92%)	(10.92%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**15.97%**	**13.93%**	**16.60%**	**4.40%**	**9.17%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**16.47%**	**14.43%**	**17.10%**	**4.83%**	**9.60%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Jefferson Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$718,926	$566,825
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(389,629)	(405,969)
Allocated pooled OPSRP UAL	53,366	40,132
Side account	0	0
Net unfunded pension actuarial accrued liability	382,663	200,988
Combined valuation payroll	375,381	351,040
Net pension UAL as a percentage of payroll	102%	57%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(10.92%)	(11.43%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,823	$2,790
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$60,472	$10,613	17.89%	$60,710	$10,861
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**60,472**	**10,613**		**60,710**	**10,861**
Tier 1 Police & Fire	21.37%	102,384	21,879	21.53%	89,375	19,242
Tier 2 Police & Fire	18.95%	92,209	17,474	19.00%	96,256	18,289
Total Police & Fire		**194,593**	**39,353**		**185,631**	**37,531**
Total		**$255,065**	**$49,966**		**$246,341**	**$48,392**
Employer normal cost rate						
General Service			**17.55%**			**17.89%**
Police & Fire			**20.22%**			**20.22%**
Aggregate (Default)			**19.59%**			**19.64%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($405,969)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(12.64%)
B. Actual employer payroll	183,464
C. Payment to transition liability/(surplus)	(23,030)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(10.24%)
B. Actual employer payroll	200,128
C. Payment to transition liability/(surplus)	(20,493)
4. Supplemental payment to transition liability	0
5. Interest	(27,183)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($389,629)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(389,629)	(405,969)
2. Combined valuation payroll	375,381	351,040
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(10.92%)**	**(11.43%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	375,381	351,040
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of John Day/2229
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
City of John Day/2229

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of John Day -- #2229

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of John Day to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of John Day.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of John Day

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.84%	14.08%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(10.44%)	(10.44%)	(10.44%)	(10.44%)	(10.44%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**12.70%**	**10.94%**	**15.81%**	**4.88%**	**9.65%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**13.20%**	**11.44%**	**16.31%**	**5.31%**	**10.08%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of John Day

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	$1,458,365	$1,243,880
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(755,355)	(766,504)
Allocated pooled OPSRP UAL	108,254	88,067
Side account	0	0
Net unfunded pension actuarial accrued liability	811,264	565,443
Combined valuation payroll	761,473	770,347
Net pension UAL as a percentage of payroll	107%	73%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(10.44%)	(9.83%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,697	$6,123
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	$75,218	$13,201	17.89%	$136,367	$24,396
Tier 2 General Service	12.26%	143,124	17,547	12.44%	142,707	17,753
Total General Service		**218,342**	**30,748**		**279,074**	**42,149**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	123,712	23,443	19.00%	124,341	23,625
Total Police & Fire		**123,712**	**23,443**		**124,341**	**23,625**
Total		**$342,054**	**$54,191**		**$403,415**	**$65,774**
Employer normal cost rate						
General Service			**14.08%**			**15.10%**
Police & Fire			**18.95%**			**19.00%**
Aggregate (Default)			**15.84%**			**16.30%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($766,504)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(8.13%)
B. Actual employer payroll	365,031
C. Payment to transition liability/(surplus)	(29,677)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(9.44%)
B. Actual employer payroll	361,973
C. Payment to transition liability/(surplus)	(34,171)
4. Supplemental payment to transition liability	0
5. Interest	(52,699)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($755,355)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(755,355)	(766,504)
2. Combined valuation payroll	761,473	770,347
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(10.44%)**	**(9.83%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	761,473	770,347
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Jordan Valley/2256
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
City of Jordan Valley/2256

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Jordan Valley -- #2256

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Jordan Valley to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Jordan Valley.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Jordan Valley

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(35.86%)	(35.86%)	(35.86%)	(35.86%)	(35.86%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Jordan Valley

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$114,837	$95,290
Allocated pre-SLGRP pooled liability/(surplus)	(9,857)	(10,561)
Transition liability/(surplus)	(204,358)	(197,783)
Allocated pooled OPSRP UAL	8,524	6,747
Side account	0	0
Net unfunded pension actuarial accrued liability	(90,854)	(106,307)
Combined valuation payroll	59,961	59,014
Net pension UAL as a percentage of payroll	(152%)	(180%)
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(35.86%)	(33.12%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$291	$469
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions) RHIPA	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	45,246	5,547	12.44%	45,268	5,631
Total General Service		**45,246**	**5,547**		**45,268**	**5,631**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$45,246**	**$5,547**		**$45,268**	**$5,631**
Employer normal cost rate						
General Service			**12.26%**			**12.44%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**12.26%**			**12.44%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($197,783)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(14.77%)
B. Actual employer payroll	28,603
C. Payment to transition liability/(surplus)	(3,939)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(13.87%)
B. Actual employer payroll	28,603
C. Payment to transition liability/(surplus)	(3,744)
4. Supplemental payment to transition liability	0
5. Interest	(14,258)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($204,358)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(204,358)	(197,783)
2. Combined valuation payroll	59,961	59,014
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(35.86%)**	**(33.12%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	59,961	59,014
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members’ variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Junction City/2199
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
City of Junction City/2199

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Junction City -- #2199

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Junction City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Junction City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Junction City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.77%	13.53%	19.87%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(0.68%)	(0.68%)	(0.68%)	(0.68%)	(0.68%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**20.66%**	**18.42%**	**24.76%**	**12.91%**	**17.68%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**21.16%**	**18.92%**	**25.26%**	**13.34%**	**18.11%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Junction City

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$4,641,651	$3,999,188
Allocated pre-SLGRP pooled liability/(surplus)	(398,404)	(443,231)
Transition liability/(surplus)	(156,617)	(161,403)
Allocated pooled OPSRP UAL	344,548	283,145
Side account	0	0
Net unfunded pension actuarial accrued liability	4,431,178	3,677,699
Combined valuation payroll	2,423,599	2,476,736
Net pension UAL as a percentage of payroll	183%	148%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.68%)	(0.64%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$11,768	$19,687
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2015	December 31, 2014
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions) **RHIA**	**Actuarial Valuation as of December 31, 2015**	**Actuarial Valuation as of December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions) **RHIPA**	**Actuarial Valuation as of December 31, 2015**	**Actuarial Valuation as of December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$193,117	$33,892	17.89%	$241,884	$43,273
Tier 2 General Service	12.26%	613,423	75,206	12.44%	674,845	83,951
Total General Service		**806,540**	**109,098**		**916,729**	**127,224**
Tier 1 Police & Fire	21.37%	168,416	35,990	21.53%	96,366	20,748
Tier 2 Police & Fire	18.95%	273,470	51,823	19.00%	306,305	58,198
Total Police & Fire		**441,886**	**87,813**		**402,671**	**78,946**
Total		**$1,248,426**	**$196,911**		**$1,319,400**	**$206,170**
Employer normal cost rate						
General Service			**13.53%**			**13.88%**
Police & Fire			**19.87%**			**19.61%**
Aggregate (Default)			**15.77%**			**15.63%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($161,403)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(0.67%)
B. Actual employer payroll	1,167,928
C. Payment to transition liability/(surplus)	(7,825)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(0.66%)
B. Actual employer payroll	1,195,256
C. Payment to transition liability/(surplus)	(7,888)
4. Supplemental payment to transition liability	0
5. Interest	(10,927)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($156,617)**

[1] Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(156,617)	(161,403)
2. Combined valuation payroll	2,423,599	2,476,736
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(0.68%)**	**(0.64%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	2,423,599	2,476,736
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Junction City Fire Department/2763
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
Junction City Fire Department/2763

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Junction City Fire Department -- #2763

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Junction City Fire Department to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Junction City Fire Department.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Junction City Fire Department

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.52%	12.26%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(4.56%)	(4.56%)	(4.56%)	(4.56%)	(4.56%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**19.26%**	**15.00%**	**21.69%**	**10.76%**	**15.53%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**19.76%**	**15.50%**	**22.19%**	**11.19%**	**15.96%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Junction City Fire Department

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$406,139	$339,730
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(91,899)	(96,167)
Allocated pooled OPSRP UAL	30,148	24,053
Side account	0	0
Net unfunded pension actuarial accrued liability	344,388	267,616
Combined valuation payroll	212,062	210,398
Net pension UAL as a percentage of payroll	162%	127%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.56%)	(4.52%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,030	$1,672
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	33,277	4,080	12.44%	29,783	3,705
Total General Service		**33,277**	**4,080**		**29,783**	**3,705**
Tier 1 Police & Fire	21.37%	0	0	21.53%	81,060	17,452
Tier 2 Police & Fire	18.95%	58,356	11,058	19.00%	56,152	10,669
Total Police & Fire		**58,356**	**11,058**		**137,212**	**28,121**
Total		**$91,633**	**$15,138**		**$166,995**	**$31,826**
Employer normal cost rate						
General Service			**12.26%**			**12.44%**
Police & Fire			**18.95%**			**20.49%**
Aggregate (Default)			**16.52%**			**19.06%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($96,167)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(3.67%)
B. Actual employer payroll	128,844
C. Payment to transition liability/(surplus)	(4,729)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(3.60%)
B. Actual employer payroll	165,303
C. Payment to transition liability/(surplus)	(5,951)
4. Supplemental payment to transition liability	0
5. Interest	(6,412)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($91,899)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(91,899)	(96,167)
2. Combined valuation payroll	212,062	210,398
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(4.56%)**	**(4.52%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	212,062	210,398
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Keizer Fire Department/2559
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Keizer Fire Department/2559

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Keizer Fire Department -- #2559

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Keizer Fire Department to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Keizer Fire Department.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Keizer Fire Department

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.61%	17.55%	19.80%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(4.93%)	(4.93%)	(4.93%)	(4.93%)	(4.93%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**21.98%**	**19.92%**	**22.17%**	**10.39%**	**15.16%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**22.48%**	**20.42%**	**22.67%**	**10.82%**	**15.59%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

[2] *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Keizer Fire Department

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$4,781,274	$3,352,720
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(1,169,513)	(1,225,401)
Allocated pooled OPSRP UAL	354,913	237,375
Side account	0	0
Net unfunded pension actuarial accrued liability	3,966,674	2,364,694
Combined valuation payroll	2,496,502	2,076,372
Net pension UAL as a percentage of payroll	159%	114%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.93%)	(5.83%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$12,122	$16,504
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$88,507	$15,533	17.89%	$72,310	$12,936
Tier 2 General Service	12.26%	0	0	12.44%	208	26
Total General Service		**88,507**	**15,533**		**72,518**	**12,962**
Tier 1 Police & Fire	21.37%	334,176	71,413	21.53%	318,526	68,579
Tier 2 Police & Fire	18.95%	612,420	116,054	19.00%	573,604	108,985
Total Police & Fire		**946,596**	**187,467**		**892,130**	**177,564**
Total		**$1,035,103**	**$203,000**		**$964,648**	**$190,526**
Employer normal cost rate						
General Service			**17.55%**			**17.87%**
Police & Fire			**19.80%**			**19.90%**
Aggregate (Default)			**19.61%**			**19.75%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($1,225,401)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(6.01%)
B. Actual employer payroll	1,133,422
C. Payment to transition liability/(surplus)	(68,119)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(5.57%)
B. Actual employer payroll	1,245,301
C. Payment to transition liability/(surplus)	(69,363)
4. Supplemental payment to transition liability	0
5. Interest	(81,594)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($1,169,513)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,169,513)	(1,225,401)
2. Combined valuation payroll	2,496,502	2,076,372
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(4.93%)**	**(5.83%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	2,496,502	2,076,372
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of King City/2287
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of King City/2287

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
City of King City/2287

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of King City -- #2287

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of King City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of King City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of King City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(4.46%)	(4.46%)	(4.46%)	(4.46%)	(4.46%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**21.79%**	**17.65%**	**21.79%**	**10.86%**	**15.63%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**22.29%**	**18.15%**	**22.29%**	**11.29%**	**16.06%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of King City

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$708,371	$521,079
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(156,795)	(165,591)
Allocated pooled OPSRP UAL	52,582	36,893
Side account	0	0
Net unfunded pension actuarial accrued liability	604,158	392,381
Combined valuation payroll	369,870	322,709
Net pension UAL as a percentage of payroll	163%	122%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.46%)	(5.07%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$1,796	$2,565
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions) RHIA	Actuarial Valuation as of December 31, 2015	December 31, 2014
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions) RHIPA	Actuarial Valuation as of December 31, 2015	December 31, 2014
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	225,389	42,711	19.00%	175,234	33,294
Total Police & Fire		**225,389**	**42,711**		**175,234**	**33,294**
Total		**$225,389**	**$42,711**		**$175,234**	**$33,294**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**18.95%**			**19.00%**
Aggregate (Default)			**18.95%**			**19.00%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($165,591)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(5.98%)
B. Actual employer payroll	177,562
C. Payment to transition liability/(surplus)	(10,618)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(5.20%)
B. Actual employer payroll	175,319
C. Payment to transition liability/(surplus)	(9,117)
4. Supplemental payment to transition liability	0
5. Interest	(10,939)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($156,795)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(156,795)	(165,591)
2. Combined valuation payroll	369,870	322,709
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(4.46%)**	**(5.07%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	369,870	322,709
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Klamath Community College/2906
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Klamath Community College/2906

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Klamath Community College -- #2906

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Klamath Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Klamath Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Klamath Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate[2]	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief [2]	(0.69%)	(0.69%)	(0.69%)	(0.69%)	(0.69%)
Net pension contribution rate	**22.90%**	**22.90%**	**28.31%**	**16.39%**	**21.16%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**23.40%**	**23.40%**	**28.81%**	**16.82%**	**21.59%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

[2] *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Klamath Community College

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$10,503,483	$5,946,796
Allocated pre-SLGRP pooled liability/(surplus)	917,775	664,518
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	779,670	421,037
Side account	358,238	387,203
Net unfunded pension actuarial accrued liability	11,842,690	6,645,148
Combined valuation payroll	5,484,305	3,682,909
Net pension UAL as a percentage of payroll	216%	180%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(0.69%)	(1.04%)
Allocated pooled RHIA UAL	$26,630	$29,274
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$82,957,159	$14,558,981	17.89%	$94,701,078	$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		**192,921,119**	**28,040,562**		**209,791,473**	**31,259,268**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$192,921,119**	**$28,040,562**		**$209,791,473**	**$31,259,268**
Employer normal cost rate						
General Service			**14.53%**			**14.90%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**14.53%**			**14.90%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$0**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. **Total transition liability/(surplus) rate**	**0.00%**	**0.00%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**	**$387,203**	**$387,203**
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(35,988)	(35,988)
5. Side account earnings during 2015		8,023	8,023
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***		**$358,238**	**$358,238**

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	$358,238	$387,203
Side Account 2	0	0
Side Account 3	0	0
Total	**$358,238**	**$387,203**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$358,238	$387,203
2. Combined valuation payroll	5,484,305	3,682,909
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	(0.69%)	(1.04%)

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Klamath County Emergency Communications District/2710
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Klamath County Emergency Communications District/2710

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Klamath County Emergency Communications District -- #2710

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Klamath County Emergency Communications District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Klamath County Emergency Communications District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Klamath County Emergency Communications District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.34%	14.34%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	1.78%	1.78%	1.78%	1.78%	1.78%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**21.69%**	**21.69%**	**27.29%**	**15.37%**	**20.14%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**22.19%**	**22.19%**	**27.79%**	**15.80%**	**20.57%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Klamath County Emergency Communications District

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$1,266,182	$1,038,527
Allocated pre-SLGRP pooled liability/(surplus)	(108,679)	(115,100)
Transition liability/(surplus)	111,557	113,659
Allocated pooled OPSRP UAL	93,988	73,528
Side account	0	0
Net unfunded pension actuarial accrued liability	1,363,048	1,110,614
Combined valuation payroll	661,126	643,170
Net pension UAL as a percentage of payroll	206%	173%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.78%	1.75%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$3,210	$5,112
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$115,553	$20,280	17.89%	$107,839	$19,292
Tier 2 General Service	12.26%	177,836	21,803	12.44%	130,313	16,211
Total General Service		**293,389**	**42,083**		**238,152**	**35,503**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$293,389**	**$42,083**		**$238,152**	**$35,503**
Employer normal cost rate						
General Service			**14.34%**			**14.91%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**14.34%**			**14.91%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$113,659
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	1.48%
B. Actual employer payroll	299,333
C. Payment to transition liability/(surplus)	4,430
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	1.71%
B. Actual employer payroll	319,000
C. Payment to transition liability/(surplus)	5,455
4. Supplemental payment to transition liability	0
5. Interest	7,783
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$111,557**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	111,557	113,659
2. Combined valuation payroll	661,126	643,170
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**1.78%**	**1.75%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	661,126	643,170
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Klamath County/2007
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
Klamath County/2007

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Klamath County -- #2007

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Klamath County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Klamath County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Klamath County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.65%	14.81%	19.65%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(15.21%)	(15.21%)	(15.21%)	(15.21%)	(15.21%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**11.74%**	**6.90%**	**11.74%**	**0.11%**	**4.88%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**12.24%**	**7.40%**	**12.24%**	**0.54%**	**5.31%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Klamath County

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$7,220,778	$6,713,395
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(5,448,564)	(5,712,793)
Allocated pooled OPSRP UAL	535,996	475,312
Side account	0	0
Net unfunded pension actuarial accrued liability	2,308,210	1,475,914
Combined valuation payroll	3,770,268	4,157,671
Net pension UAL as a percentage of payroll	61%	36%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(15.21%)	(13.58%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$18,307	$33,048
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	613,997	131,211	21.53%	859,427	185,035
Tier 2 Police & Fire	18.95%	1,503,804	284,971	19.00%	1,636,746	310,982
Total Police & Fire		**2,117,801**	**416,182**		**2,496,173**	**496,017**
Total		**$2,117,801**	**$416,182**		**$2,496,173**	**$496,017**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**19.65%**			**19.87%**
Aggregate (Default)			**19.65%**			**19.87%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($5,712,793)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(17.41%)
B. Actual employer payroll	1,971,349
C. Payment to transition liability/(surplus)	(327,331)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(15.98%)
B. Actual employer payroll	1,983,918
C. Payment to transition liability/(surplus)	(317,030)
4. Supplemental payment to transition liability	0
5. Interest	(380,132)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($5,448,564)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(5,448,564)	(5,712,793)
2. Combined valuation payroll	3,770,268	4,157,671
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(15.21%)**	**(13.58%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	3,770,268	4,157,671
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

City of Klamath Falls/2148
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 2016
City of Klamath Falls/2148

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Klamath Falls -- #2148

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for City of Klamath Falls to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Klamath Falls.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Klamath Falls

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.95%	15.19%	19.28%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	(6.93%)	(6.93%)	(6.93%)	(6.93%)	(6.93%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**15.59%**	**13.83%**	**17.92%**	**6.66%**	**11.43%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**16.09%**	**14.33%**	**18.42%**	**7.09%**	**11.86%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Klamath Falls

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$17,984,045	$15,144,790
Allocated pre-SLGRP pooled liability/(surplus)	(1,543,612)	(1,678,502)
Transition liability/(surplus)	(6,180,707)	(6,343,084)
Allocated pooled OPSRP UAL	1,334,950	1,072,260
Side account	0	0
Net unfunded pension actuarial accrued liability	11,594,676	8,195,464
Combined valuation payroll	9,390,217	9,379,316
Net pension UAL as a percentage of payroll	123%	87%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(6.93%)	(6.68%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$45,596	$74,552
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of December 31, 2015	Actuarial Valuation as of December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$1,722,575	$302,312	17.89%	$1,816,520	$324,975
Tier 2 General Service	12.26%	1,392,636	170,737	12.44%	1,465,869	182,354
Total General Service		**3,115,211**	**473,049**		**3,282,389**	**507,329**
Tier 1 Police & Fire	21.37%	323,358	69,102	21.53%	161,666	34,807
Tier 2 Police & Fire	18.95%	2,022,244	383,215	19.00%	2,056,394	390,715
Total Police & Fire		**2,345,602**	**452,317**		**2,218,060**	**425,522**
Total		**$5,460,813**	**$925,366**		**$5,500,449**	**$932,851**
Employer normal cost rate						
General Service			**15.19%**			**15.46%**
Police & Fire			**19.28%**			**19.18%**
Aggregate (Default)			**16.95%**			**16.96%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($6,343,084)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(6.43%)
B. Actual employer payroll	4,431,560
C. Payment to transition liability/(surplus)	(284,949)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(6.71%)
B. Actual employer payroll	4,599,701
C. Payment to transition liability/(surplus)	(308,640)
4. Supplemental payment to transition liability	0
5. Interest	(431,212)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($6,180,707)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(6,180,707)	(6,343,084)
2. Combined valuation payroll	9,390,217	9,379,316
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(6.93%)**	**(6.68%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	9,390,217	9,379,316
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Klamath Housing Authority/2721
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Klamath Housing Authority/2721

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Klamath Housing Authority -- #2721

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Klamath Housing Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Klamath Housing Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Klamath Housing Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate[2]	(5.35%)	(5.35%)	(5.35%)	(5.35%)	(5.35%)
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**14.21%**	**14.21%**	**21.89%**	**9.97%**	**14.74%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**14.71%**	**14.71%**	**22.39%**	**10.40%**	**15.17%**

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

1 *Includes Multnomah Fire District #10 rate.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Klamath Housing Authority

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$805,864	$701,092
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(214,084)	(213,943)
Allocated pooled OPSRP UAL	59,819	49,638
Side account	0	0
Net unfunded pension actuarial accrued liability	651,599	536,787
Combined valuation payroll	420,775	434,193
Net pension UAL as a percentage of payroll	155%	124%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.35%)	(4.87%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$2,043	$3,451
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	95,471	11,705	12.44%	94,002	11,694
Total General Service		**95,471**	**11,705**		**94,002**	**11,694**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$95,471**	**$11,705**		**$94,002**	**$11,694**
Employer normal cost rate						
General Service			**12.26%**			**12.44%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**12.26%**			**12.44%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	($213,943)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	(3.44%)
B. Actual employer payroll	225,811
C. Payment to transition liability/(surplus)	(7,768)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	(3.74%)
B. Actual employer payroll	187,913
C. Payment to transition liability/(surplus)	(7,027)
4. Supplemental payment to transition liability	0
5. Interest	(14,936)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**($214,084)**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(214,084)	(213,943)
2. Combined valuation payroll	420,775	434,193
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**(5.35%)**	**(4.87%)**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	420,775	434,193
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 2016

Klamath Vector Control/2624
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 2016
Klamath Vector Control/2624

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, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Klamath Vector Control -- #2624

September 2016

CONTENTS

Executive Summary

Milliman has prepared this report for Klamath Vector Control to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Klamath Vector Control.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Klamath Vector Control

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate[1]	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate[2]	4.34%	4.34%	4.34%	4.34%	4.34%
Side account rate relief [2]	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	**25.69%**	**24.72%**	**29.85%**	**17.93%**	**22.70%**
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	**0.50%**	**0.50%**	**0.50%**	**0.43%**	**0.43%**
Total net employer contribution rate	**26.19%**	**25.22%**	**30.35%**	**18.36%**	**23.13%**

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.*

2 *The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Klamath Vector Control

	Actuarial Valuation as of	
	December 31, 2015	**December 31, 2014**
Allocated pooled SLGRP T1/T2 UAL	$134,148	$86,296
Allocated pre-SLGRP pooled liability/(surplus)	(11,514)	(9,564)
Transition liability/(surplus)	28,913	28,184
Allocated pooled OPSRP UAL	9,958	6,110
Side account	0	0
Net unfunded pension actuarial accrued liability	161,505	111,026
Combined valuation payroll	70,044	53,444
Net pension UAL as a percentage of payroll	231%	208%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	4.34%	5.21%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	$340	$425
Allocated pooled RHIPA UAL	$0	$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	$424.9	$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	$38,396.8	$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	$5,594.3	$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate[1]	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	$539.5	$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	$73,529	$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	$1,309	$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	$2,109	$2,049

[1] *The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).*

Executive Summary

Principal Valuation Results (continued)

OPSRP

	Actuarial Valuation as of	
($ in millions)	**December 31, 2015**	**December 31, 2014**
General service normal cost	$342.2	$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	$69.9	$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	$3,742.5	$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

($ in millions)	Actuarial Valuation as of	
RHIA	**December 31, 2015**	**December 31, 2014**
Normal cost	$3.3	$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	$465.6	$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	$9,544.1	$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

($ in millions)	Actuarial Valuation as of	
RHIPA	**December 31, 2015**	**December 31, 2014**
Normal cost	$1.5	$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	$67.8	$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	$2,831.8	$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**	**SLGRP Normal Cost Rate**	**Employer Tier 1/Tier 2 Valuation Payroll**	**Normal Cost**
Tier 1 General Service	17.55%	$0	$0	17.89%	$0	$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		**0**	**0**		**0**	**0**
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		**0**	**0**		**0**	**0**
Total		**$0**	**$0**		**$0**	**$0**
Employer normal cost rate						
General Service			**14.81%**			**15.16%**
Police & Fire			**19.94%**			**20.08%**
Aggregate (Default)			**15.78%**			**16.05%**

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	$28,184
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate[1]	1.99%
B. Actual employer payroll	32,991
C. Payment to transition liability/(surplus)	657
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate[1]	1.90%
B. Actual employer payroll	33,250
C. Payment to transition liability/(surplus)	631
4. Supplemental payment to transition liability	0
5. Interest	2,017
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	**$28,913**

[1] *Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.*

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	28,913	28,184
2. Combined valuation payroll	70,044	53,444
3. Regular amortization factor	9.504	10.118
4. **Total transition liability/(surplus) rate**	**4.34%**	**5.21%**

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	**N/A**		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 ***(1. + 2. + 3. + 4. + 5.)***			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	**$0**	**$0**

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	$0	$0
2. Combined valuation payroll	70,044	53,444
3. Average amortization factor	9.504	10.118
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	0.00%	0.00%

[1] *For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.*

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

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. 7.50% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 6.3% in 2016 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, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called "actuarial present value," the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer's accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer's accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.

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