

October 2018

Gaston Public Schools/4034
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Gaston Public Schools/4034

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Gaston Public Schools/4034

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Gaston Public Schools -- #4034

October 2018

Milliman

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

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Executive Summary

Milliman has prepared this report for Gaston Public Schools to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Gaston Public Schools.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Gaston Public Schools

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(16.55%)	(16.55%)	(16.55%)
Net pension contribution rate	15.42%	10.03%	14.66%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	15.48%	10.03%	14.66%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Gaston Public Schools

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$7,569,982	\$9,410,704
Allocated pooled OPSRP UAL	487,656	570,754
Side account	4,450,726	4,423,899
Net unfunded pension actuarial accrued liability	3,606,912	5,557,559
Combined valuation payroll	3,236,132	3,315,212
Net pension UAL as a percentage of payroll	111%	168%
Calculated Side Account Rate Relief	(16.55%)	(14.83%)
Allocated Pooled RHIA UAL	(\$37,080)	(\$451)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$4,423,899	\$4,423,899
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(614,494)	(614,494)
5. Side account earnings during 2017		642,321	642,321
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$4,450,726	\$4,450,726

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$1,911,615	\$1,900,501
Side Account 2	2,539,111	2,523,398
Side Account 3	0	0
Total	\$4,450,726	\$4,423,899

Development of Side Account Rate

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

	December 31, 2017	December 31, 2016
1. Total side account	\$4,450,726	\$4,423,899
2. Combined valuation payroll	3,236,132	3,315,212
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(16.55%)	(14.83%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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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October 2018

Gervais School District #1/4329
Oregon Public Employees Retirement System

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October 2018
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October 2018
Gervais School District #1/4329

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Gervais School District #1 -- #4329

October 2018

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Executive Summary

Milliman has prepared this report for Gervais School District #1 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Gervais School District #1.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Gervais School District #1

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(24.16%)	(24.16%)	(24.16%)
Net pension contribution rate	7.81%	2.42%	7.05%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	7.87%	2.42%	7.05%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Gervais School District #1

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$13,089,316	\$15,184,296
Allocated pooled OPSRP UAL	843,210	920,919
Side account	11,235,179	10,898,907
Net unfunded pension actuarial accrued liability	2,697,347	5,206,308
Combined valuation payroll	5,595,621	5,349,139
Net pension UAL as a percentage of payroll	48%	97%
Calculated Side Account Rate Relief	(24.16%)	(22.65%)
Allocated Pooled RHIA UAL	(\$64,116)	(\$728)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$10,898,907	\$10,898,907
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,272,507)	(1,272,507)
5. Side account earnings during 2017		1,609,279	1,609,279
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$11,235,179	\$11,235,179

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$11,235,179	\$10,898,907
Side Account 2	0	0
Side Account 3	0	0
Total	\$11,235,179	\$10,898,907

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, 2017	December 31, 2016
1. Total side account	\$11,235,179	\$10,898,907
2. Combined valuation payroll	5,595,621	5,349,139
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(24.16%)	(22.65%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Gladstone School District #115/3160
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Gladstone School District #115/3160

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Gladstone School District #115/3160

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Gladstone School District #115 -- #3160

October 2018

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Executive Summary

Milliman has prepared this report for Gladstone School District #115 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Gladstone School District #115.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Gladstone School District #115

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(24.21%)	(24.21%)	(24.21%)
Net pension contribution rate	7.76%	2.37%	7.00%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	7.82%	2.37%	7.00%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Gladstone School District #115

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$24,371,911	\$28,011,145
Allocated pooled OPSRP UAL	1,570,032	1,698,861
Side account	20,965,226	20,106,350
Net unfunded pension actuarial accrued liability	4,976,717	9,603,656
Combined valuation payroll	10,418,878	9,867,794
Net pension UAL as a percentage of payroll	48%	97%
Calculated Side Account Rate Relief	(24.21%)	(22.65%)
Allocated Pooled RHIA UAL	(\$119,382)	(\$1,344)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$20,106,350	\$20,106,350
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(2,134,776)	(2,134,776)
5. Side account earnings during 2017		2,994,153	2,994,153
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$20,965,226	\$20,965,226

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$20,965,226	\$20,106,350
Side Account 2	0	0
Side Account 3	0	0
Total	\$20,965,226	\$20,106,350

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, 2017	December 31, 2016
1. Total side account	\$20,965,226	\$20,106,350
2. Combined valuation payroll	10,418,878	9,867,794
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(24.21%)	(22.65%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Glide School District #12/3316
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Glide School District #12/3316

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Glide School District #12/3316

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Glide School District #12 -- #3316

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Glide School District #12 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Glide School District #12.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Glide School District #12

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(11.57%)	(11.57%)	(11.57%)
Net pension contribution rate	20.40%	15.01%	19.64%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	20.46%	15.01%	19.64%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

Executive Summary

Accounting Information

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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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Glide School District #12

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$8,654,160	\$10,560,048
Allocated pooled OPSRP UAL	557,499	640,461
Side account	3,559,346	3,484,553
Net unfunded pension actuarial accrued liability	5,652,313	7,715,956
Combined valuation payroll	3,699,613	3,720,104
Net pension UAL as a percentage of payroll	153%	207%
Calculated Side Account Rate Relief	(11.57%)	(10.41%)
Allocated Pooled RHIA UAL	(\$42,391)	(\$507)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$3,484,553	\$3,484,553
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(432,911)	(432,911)
5. Side account earnings during 2017		508,205	508,205
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$3,559,346	\$3,559,346

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$3,559,346	\$3,484,553
Side Account 2	0	0
Side Account 3	0	0
Total	\$3,559,346	\$3,484,553

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, 2017	December 31, 2016
1. Total side account	\$3,559,346	\$3,484,553
2. Combined valuation payroll	3,699,613	3,720,104
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(11.57%)	(10.41%)

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

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Greater Albany School District #8J/4260
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Greater Albany School District #8J/4260

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Greater Albany School District #8J/4260

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Greater Albany School District #8J -- #4260

October 2018

Milliman

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

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Executive Summary

Milliman has prepared this report for Greater Albany School District #8J to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Greater Albany School District #8J.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Greater Albany School District #8J

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(8.89%)	(8.89%)	(8.89%)
Net pension contribution rate	23.08%	17.69%	22.32%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	23.14%	17.69%	22.32%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Greater Albany School District #8J

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$115,369,054	\$133,812,157
Allocated pooled OPSRP UAL	7,432,045	8,115,636
Side account	36,442,789	35,834,314
Net unfunded pension actuarial accrued liability	86,358,310	106,093,479
Combined valuation payroll	49,319,730	47,139,479
Net pension UAL as a percentage of payroll	175%	225%
Calculated Side Account Rate Relief	(8.89%)	(8.45%)
Allocated Pooled RHIA UAL	(\$565,115)	(\$6,418)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$35,834,314	\$35,834,314
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(4,636,286)	(4,636,286)
5. Side account earnings during 2017		5,245,261	5,245,261
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$36,442,789	\$36,442,789

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$36,442,789	\$35,834,314
Side Account 2	0	0
Side Account 3	0	0
Total	\$36,442,789	\$35,834,314

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, 2017	December 31, 2016
1. Total side account	\$36,442,789	\$35,834,314
2. Combined valuation payroll	49,319,730	47,139,479
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(8.89%)	(8.45%)

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

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Gresham-Barlow School District #10/4332
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Gresham-Barlow School District #10/4332

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Gresham-Barlow School District #10/4332

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Gresham-Barlow School District #10 -- #4332

October 2018

Milliman

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

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Executive Summary

Milliman has prepared this report for Gresham-Barlow School District #10 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Gresham-Barlow School District #10.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Gresham-Barlow School District #10

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(14.14%)	(14.14%)	(14.14%)
Net pension contribution rate	17.83%	12.44%	17.07%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	17.89%	12.44%	17.07%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Gresham-Barlow School District #10

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$135,635,968	\$162,866,219
Allocated pooled OPSRP UAL	8,737,635	9,877,749
Side account	68,132,913	64,959,150
Net unfunded pension actuarial accrued liability	76,240,690	107,784,818
Combined valuation payroll	57,983,741	57,374,673
Net pension UAL as a percentage of payroll	131%	188%
Calculated Side Account Rate Relief	(14.14%)	(12.59%)
Allocated Pooled RHIA UAL	(\$664,389)	(\$7,812)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$64,959,150	\$64,959,150
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(6,379,023)	(6,379,023)
5. Side account earnings during 2017		9,553,786	9,553,786
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$68,132,913	\$68,132,913

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$40,239,589	\$38,369,952
Side Account 2	27,893,323	26,589,197
Side Account 3	0	0
Total	\$68,132,913	\$64,959,150

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, 2017	December 31, 2016
1. Total side account	\$68,132,913	\$64,959,150
2. Combined valuation payroll	57,983,741	57,374,673
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(14.14%)	(12.59%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Harney County School District #3/4326
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Harney County School District #3/4326

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Harney County School District #3/4326

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Harney County School District #3 -- #4326

October 2018

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Executive Summary

Milliman has prepared this report for Harney County School District #3 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Harney County School District #3.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Harney County School District #3

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(52.40%)	(52.40%)	(52.40%)
Net pension contribution rate	0.00%	0.00%	0.00%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	0.06%	0.00%	0.00%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Harney County School District #3

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$9,377,330	\$11,425,967
Allocated pooled OPSRP UAL	604,085	692,979
Side account	17,458,422	15,967,484
Net unfunded pension actuarial accrued liability	(7,477,007)	(3,848,538)
Combined valuation payroll	4,008,765	4,025,151
Net pension UAL as a percentage of payroll	(187%)	(96%)
Calculated Side Account Rate Relief	(52.40%)	(44.10%)
Allocated Pooled RHIA UAL	(\$45,933)	(\$548)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$15,967,484	\$15,967,484
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(935,175)	(935,175)
5. Side account earnings during 2017		2,427,113	2,427,113
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$17,458,422	\$17,458,422

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$7,462,408	\$6,868,330
Side Account 2	9,996,014	9,099,154
Side Account 3	0	0
Total	\$17,458,422	\$15,967,484

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, 2017	December 31, 2016
1. Total side account	\$17,458,422	\$15,967,484
2. Combined valuation payroll	4,008,765	4,025,151
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(52.40%)	(44.10%)

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

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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.

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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.

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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.

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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.

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Hermiston School District #8R/4258
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Hermiston School District #8R/4258

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Hermiston School District #8R/4258

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Hermiston School District #8R -- #4258

October 2018

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Executive Summary

Milliman has prepared this report for Hermiston School District #8R to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Hermiston School District #8R.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Hermiston School District #8R

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(9.97%)	(9.97%)	(9.97%)
Net pension contribution rate	22.00%	16.61%	21.24%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	22.06%	16.61%	21.24%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Hermiston School District #8R

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$58,298,242	\$67,815,348
Allocated pooled OPSRP UAL	3,755,558	4,112,965
Side account	20,645,300	20,247,648
Net unfunded pension actuarial accrued liability	41,408,500	51,680,665
Combined valuation payroll	24,922,226	23,890,058
Net pension UAL as a percentage of payroll	166%	216%
Calculated Side Account Rate Relief	(9.97%)	(9.43%)
Allocated Pooled RHIA UAL	(\$285,564)	(\$3,253)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$20,247,648	\$20,247,648
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(2,569,262)	(2,569,262)
5. Side account earnings during 2017		2,967,914	2,967,914
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$20,645,300	\$20,645,300

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$13,541,367	\$13,296,545
Side Account 2	7,103,933	6,951,104
Side Account 3	0	0
Total	\$20,645,300	\$20,247,648

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, 2017	December 31, 2016
1. Total side account	\$20,645,300	\$20,247,648
2. Combined valuation payroll	24,922,226	23,890,058
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(9.97%)	(9.43%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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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October 2018

High Desert Education Service District/4252
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

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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

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- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
High Desert Education Service District/4252

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
High Desert Education Service District/4252

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

High Desert Education Service District -- #4252

October 2018

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Executive Summary

Milliman has prepared this report for High Desert Education Service District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to High Desert Education Service District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for High Desert Education Service District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(9.99%)	(9.99%)	(9.99%)
Net pension contribution rate	21.98%	16.59%	21.22%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	22.04%	16.59%	21.22%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

High Desert Education Service District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$29,163,000	\$33,600,655
Allocated pooled OPSRP UAL	1,878,673	2,037,862
Side account	10,347,116	10,051,772
Net unfunded pension actuarial accrued liability	20,694,557	25,586,745
Combined valuation payroll	12,467,046	11,836,872
Net pension UAL as a percentage of payroll	166%	216%
Calculated Side Account Rate Relief	(9.99%)	(9.44%)
Allocated Pooled RHIA UAL	(\$142,850)	(\$1,612)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$10,051,772	\$10,051,772
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,175,913)	(1,175,913)
5. Side account earnings during 2017		1,471,757	1,471,757
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$10,347,116	\$10,347,116

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$10,347,116	\$10,051,772
Side Account 2	0	0
Side Account 3	0	0
Total	\$10,347,116	\$10,051,772

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, 2017	December 31, 2016
1. Total side account	\$10,347,116	\$10,051,772
2. Combined valuation payroll	12,467,046	11,836,872
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(9.99%)	(9.44%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Hillsboro School District #1J/4341
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Hillsboro School District #1J/4341

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Hillsboro School District #1J/4341

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Hillsboro School District #1J -- #4341

October 2018

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Executive Summary

Milliman has prepared this report for Hillsboro School District #1J to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Hillsboro School District #1J.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Hillsboro School District #1J

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(10.30%)	(10.30%)	(10.30%)
Net pension contribution rate	21.67%	16.28%	20.91%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	21.73%	16.28%	20.91%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Hillsboro School District #1J

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$287,619,148	\$341,141,059
Allocated pooled OPSRP UAL	18,528,353	20,690,023
Side account	116,948,871	114,039,176
Net unfunded pension actuarial accrued liability	189,198,630	247,791,906
Combined valuation payroll	122,955,840	120,177,510
Net pension UAL as a percentage of payroll	154%	206%
Calculated Side Account Rate Relief	(10.30%)	(9.60%)
Allocated Pooled RHIA UAL	(\$1,408,852)	(\$16,363)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$114,039,176	\$114,039,176
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(13,780,805)	(13,780,805)
5. Side account earnings during 2017		16,691,500	16,691,500
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$116,948,871	\$116,948,871

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$79,178,921	\$78,153,585
Side Account 2	37,769,950	35,885,591
Side Account 3	0	0
Total	\$116,948,871	\$114,039,176

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, 2017	December 31, 2016
1. Total side account	\$116,948,871	\$114,039,176
2. Combined valuation payroll	122,955,840	120,177,510
3. Average amortization factor	9.240	9.888
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(10.30%)	(9.60%)

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

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Hood River County School District/3409
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Hood River County School District/3409

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Hood River County School District/3409

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Hood River County School District -- #3409

October 2018

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Executive Summary

Milliman has prepared this report for Hood River County School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Hood River County School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Hood River County School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(12.00%)	(12.00%)	(12.00%)
Net pension contribution rate	19.97%	14.58%	19.21%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	20.03%	14.58%	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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

Executive Summary

Accounting Information

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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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Hood River County School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$58,365,850	\$68,893,388
Allocated pooled OPSRP UAL	3,759,913	4,178,347
Side account	24,884,019	24,060,805
Net unfunded pension actuarial accrued liability	37,241,744	49,010,930
Combined valuation payroll	24,951,128	24,269,831
Net pension UAL as a percentage of payroll	149%	202%
Calculated Side Account Rate Relief	(12.00%)	(11.02%)
Allocated Pooled RHIA UAL	(\$285,895)	(\$3,305)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
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Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$24,060,805	\$24,060,805
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(2,720,465)	(2,720,465)
5. Side account earnings during 2017		3,544,679	3,544,679
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$24,884,019	\$24,884,019

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$15,735,206	\$15,221,227
Side Account 2	9,148,813	8,839,577
Side Account 3	0	0
Total	\$24,884,019	\$24,060,805

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, 2017	December 31, 2016
1. Total side account	\$24,884,019	\$24,060,805
2. Combined valuation payroll	24,951,128	24,269,831
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(12.00%)	(11.02%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

InterMountain Education Service District/4223
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
InterMountain Education Service District/4223

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
InterMountain Education Service District/4223

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

InterMountain Education Service District -- #4223

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for InterMountain Education Service District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to InterMountain Education Service District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for InterMountain Education Service District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(12.97%)	(12.97%)	(12.97%)
Net pension contribution rate	19.00%	13.61%	18.24%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	19.06%	13.61%	18.24%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

InterMountain Education Service District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$24,307,895	\$26,799,374
Allocated pooled OPSRP UAL	1,565,908	1,625,368
Side account	11,206,552	10,869,982
Net unfunded pension actuarial accrued liability	14,667,251	17,554,760
Combined valuation payroll	10,391,512	9,440,910
Net pension UAL as a percentage of payroll	141%	186%
Calculated Side Account Rate Relief	(12.97%)	(12.80%)
Allocated Pooled RHIA UAL	(\$119,068)	(\$1,285)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$10,869,982	\$10,869,982
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(1,274,961)	(1,274,961)
5. Side account earnings during 2017		1,612,532	1,612,532
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$11,206,552	\$11,206,552

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$2,741,824	\$2,932,394
Side Account 2	8,464,728	7,937,587
Side Account 3	0	0
Total	\$11,206,552	\$10,869,982

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, 2017	December 31, 2016
1. Total side account	\$11,206,552	\$10,869,982
2. Combined valuation payroll	10,391,512	9,440,910
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(12.97%)	(12.80%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Jefferson School District #14Cj/3729
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Jefferson School District #14Cj/3729

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Jefferson School District #14Cj/3729

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Jefferson School District #14Cj -- #3729

October 2018

Milliman

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

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Executive Summary

Milliman has prepared this report for Jefferson School District #14Cj to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Jefferson School District #14Cj.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Jefferson School District #14Cj

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(17.76%)	(17.76%)	(17.76%)
Net pension contribution rate	14.21%	8.82%	13.45%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	14.27%	8.82%	13.45%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Jefferson School District #14Cj

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$12,213,222	\$14,725,978
Allocated pooled OPSRP UAL	786,773	893,123
Side account	7,709,297	7,435,380
Net unfunded pension actuarial accrued liability	5,290,698	8,183,721
Combined valuation payroll	5,221,095	5,187,682
Net pension UAL as a percentage of payroll	101%	158%
Calculated Side Account Rate Relief	(17.76%)	(15.94%)
Allocated Pooled RHIA UAL	(\$59,824)	(\$706)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$7,435,380	\$7,435,380
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(826,646)	(826,646)
5. Side account earnings during 2017		1,101,063	1,101,063
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$7,709,297	\$7,709,297

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$7,709,297	\$7,435,380
Side Account 2	0	0
Side Account 3	0	0
Total	\$7,709,297	\$7,435,380

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, 2017	December 31, 2016
1. Total side account	\$7,709,297	\$7,435,380
2. Combined valuation payroll	5,221,095	5,187,682
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(17.76%)	(15.94%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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.

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

John Day School District/4315
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
John Day School District/4315

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
John Day School District/4315

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

John Day School District -- #4315

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for John Day School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to John Day School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for John Day School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(17.29%)	(17.29%)	(17.29%)
Net pension contribution rate	14.68%	9.29%	13.92%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	14.74%	9.29%	13.92%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

John Day School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$7,110,209	\$9,268,496
Allocated pooled OPSRP UAL	458,038	562,129
Side account	4,367,966	4,226,447
Net unfunded pension actuarial accrued liability	3,200,281	5,604,178
Combined valuation payroll	3,039,581	3,265,115
Net pension UAL as a percentage of payroll	105%	172%
Calculated Side Account Rate Relief	(17.29%)	(14.39%)
Allocated Pooled RHIA UAL	(\$34,828)	(\$445)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$4,226,447	\$4,226,447
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(478,047)	(478,047)
5. Side account earnings during 2017		620,066	620,066
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$4,367,966	\$4,367,966

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$4,367,966	\$4,226,447
Side Account 2	0	0
Side Account 3	0	0
Total	\$4,367,966	\$4,226,447

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, 2017	December 31, 2016
1. Total side account	\$4,367,966	\$4,226,447
2. Combined valuation payroll	3,039,581	3,265,115
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(17.29%)	(14.39%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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

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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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

La Grande Public Schools/3965
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018

La Grande Public Schools/3965

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
La Grande Public Schools/3965

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

La Grande Public Schools -- #3965

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for La Grande Public Schools to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to La Grande Public Schools.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for La Grande Public Schools

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(12.13%)	(12.13%)	(12.13%)
Net pension contribution rate	19.84%	14.45%	19.08%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	19.90%	14.45%	19.08%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

La Grande Public Schools

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$25,297,296	\$28,247,610
Allocated pooled OPSRP UAL	1,629,645	1,713,202
Side account	10,900,264	10,544,410
Net unfunded pension actuarial accrued liability	16,026,677	19,416,402
Combined valuation payroll	10,814,476	9,951,096
Net pension UAL as a percentage of payroll	148%	195%
Calculated Side Account Rate Relief	(12.13%)	(11.78%)
Allocated Pooled RHIA UAL	(\$123,914)	(\$1,355)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$10,544,410	\$10,544,410
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(1,207,672)	(1,207,672)
5. Side account earnings during 2017		1,564,526	1,564,526
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$10,900,264	\$10,900,264

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$8,670,279	\$8,388,462
Side Account 2	2,229,985	2,155,948
Side Account 3	0	0
Total	\$10,900,264	\$10,544,410

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, 2017	December 31, 2016
1. Total side account	\$10,900,264	\$10,544,410
2. Combined valuation payroll	10,814,476	9,951,096
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(12.13%)	(11.78%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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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October 2018

Lake Oswego School District/4268
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

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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.

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October 2018
Lake Oswego School District/4268

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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.

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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 July 2017.

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October 2018
Lake Oswego School District/4268

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Lake Oswego School District -- #4268

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Lake Oswego School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Lake Oswego School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Lake Oswego School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(13.75%)	(13.75%)	(13.75%)
Net pension contribution rate	18.22%	12.83%	17.46%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	18.28%	12.83%	17.46%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Lake Oswego School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$91,594,747	\$103,775,659
Allocated pooled OPSRP UAL	5,900,511	6,293,938
Side account	44,729,878	43,746,243
Net unfunded pension actuarial accrued liability	52,765,380	66,323,354
Combined valuation payroll	39,156,326	36,558,192
Net pension UAL as a percentage of payroll	135%	181%
Calculated Side Account Rate Relief	(13.75%)	(13.30%)
Allocated Pooled RHIA UAL	(\$448,661)	(\$4,978)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$43,746,243	\$43,746,243
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(5,437,285)	(5,437,285)
5. Side account earnings during 2017		6,421,920	6,421,920
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$44,729,878	\$44,729,878

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$27,166,952	\$26,569,723
Side Account 2	17,562,927	17,176,520
Side Account 3	0	0
Total	\$44,729,878	\$43,746,243

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, 2017	December 31, 2016
1. Total side account	\$44,729,878	\$43,746,243
2. Combined valuation payroll	39,156,326	36,558,192
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(13.75%)	(13.30%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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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October 2018

Lane County Education Service District/4276
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018

Lane County Education Service District/4276

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Lane County Education Service District/4276

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

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

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

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

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

Sincerely,

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

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

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

Scott Preppernau, FSA, EA, MAAA
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ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Lane County Education Service District -- #4276

October 2018

Milliman

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Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Lane County Education Service District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(8.49%)	(8.49%)	(8.49%)
Net pension contribution rate	23.48%	18.09%	22.72%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	23.54%	18.09%	22.72%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Lane County Education Service District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$18,764,139	\$21,300,851
Allocated pooled OPSRP UAL	1,208,781	1,291,885
Side account	5,661,047	5,529,859
Net unfunded pension actuarial accrued liability	14,311,873	17,062,877
Combined valuation payroll	8,021,582	7,503,885
Net pension UAL as a percentage of payroll	178%	227%
Calculated Side Account Rate Relief	(8.49%)	(8.19%)
Allocated Pooled RHIA UAL	(\$91,913)	(\$1,022)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$5,529,859	\$5,529,859
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(681,023)	(681,023)
5. Side account earnings during 2017		812,712	812,712
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$5,661,047	\$5,661,047

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$5,661,047	\$5,529,859
Side Account 2	0	0
Side Account 3	0	0
Total	\$5,661,047	\$5,529,859

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, 2017	December 31, 2016
1. Total side account	\$5,661,047	\$5,529,859
2. Combined valuation payroll	8,021,582	7,503,885
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(8.49%)	(8.19%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Lincoln County School District/3579
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Lincoln County School District/3579

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Lincoln County School District/3579

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Lincoln County School District -- #3579

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Lincoln County School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Lincoln County School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Lincoln County School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(41.37%)	(41.37%)	(41.37%)
Net pension contribution rate	0.00%	0.00%	0.00%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	0.06%	0.00%	0.00%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

Executive Summary

Accounting Information

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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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Lincoln County School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$53,035,385	\$62,663,594
Allocated pooled OPSRP UAL	3,416,526	3,800,514
Side account	77,976,303	71,893,002
Net unfunded pension actuarial accrued liability	(21,524,392)	(5,428,894)
Combined valuation payroll	22,672,379	22,075,193
Net pension UAL as a percentage of payroll	(95%)	(25%)
Calculated Side Account Rate Relief	(41.37%)	(36.21%)
Allocated Pooled RHIA UAL	(\$259,784)	(\$3,006)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$71,893,002	\$71,893,002
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(4,816,316)	(4,816,316)
5. Side account earnings during 2017		10,900,617	10,900,617
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$77,976,303	\$77,976,303

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$31,968,169	\$30,148,067
Side Account 2	46,008,134	41,744,935
Side Account 3	0	0
Total	\$77,976,303	\$71,893,002

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, 2017	December 31, 2016
1. Total side account	\$77,976,303	\$71,893,002
2. Combined valuation payroll	22,672,379	22,075,193
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(41.37%)	(36.21%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Madras School District/3447
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Madras School District/3447

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Madras School District/3447

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Madras School District -- #3447

October 2018

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Executive Summary

Milliman has prepared this report for Madras School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Madras School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Madras School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(8.63%)	(8.63%)	(8.63%)
Net pension contribution rate	23.34%	17.95%	22.58%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	23.40%	17.95%	22.58%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Madras School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$42,790,015	\$50,585,511
Allocated pooled OPSRP UAL	2,756,522	3,067,984
Side account	13,125,568	12,650,177
Net unfunded pension actuarial accrued liability	32,420,969	41,003,318
Combined valuation payroll	18,292,531	17,820,314
Net pension UAL as a percentage of payroll	177%	230%
Calculated Side Account Rate Relief	(8.63%)	(7.89%)
Allocated Pooled RHIA UAL	(\$209,599)	(\$2,426)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$12,650,177	\$12,650,177
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,402,285)	(1,402,285)
5. Side account earnings during 2017		1,878,176	1,878,176
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$13,125,568	\$13,125,568

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$13,125,568	\$12,650,177
Side Account 2	0	0
Side Account 3	0	0
Total	\$13,125,568	\$12,650,177

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, 2017	December 31, 2016
1. Total side account	\$13,125,568	\$12,650,177
2. Combined valuation payroll	18,292,531	17,820,314
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(8.63%)	(7.89%)

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

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

McMinnville Schools/4142
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
McMinnville Schools/4142

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
McMinnville Schools/4142

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

McMinnville Schools -- #4142

October 2018

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Executive Summary

Milliman has prepared this report for McMinnville Schools to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to McMinnville Schools.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for McMinnville Schools

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(8.96%)	(8.96%)	(8.96%)
Net pension contribution rate	23.01%	17.62%	22.25%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	23.07%	17.62%	22.25%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

McMinnville Schools

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$87,023,758	\$102,043,477
Allocated pooled OPSRP UAL	5,606,049	6,188,882
Side account	27,700,025	27,010,584
Net unfunded pension actuarial accrued liability	64,929,782	81,221,775
Combined valuation payroll	37,202,249	35,947,977
Net pension UAL as a percentage of payroll	175%	226%
Calculated Side Account Rate Relief	(8.96%)	(8.36%)
Allocated Pooled RHIA UAL	(\$426,271)	(\$4,895)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$27,010,584	\$27,010,584
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(3,280,296)	(3,280,296)
5. Side account earnings during 2017		3,970,736	3,970,736
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$27,700,025	\$27,700,025

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$16,662,653	\$16,251,555
Side Account 2	11,037,372	10,759,029
Side Account 3	0	0
Total	\$27,700,025	\$27,010,584

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, 2017	December 31, 2016
1. Total side account	\$27,700,025	\$27,010,584
2. Combined valuation payroll	37,202,249	35,947,977
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(8.96%)	(8.36%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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.

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Medford School District #549C/4288
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Medford School District #549C/4288

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Medford School District #549C/4288

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Medford School District #549C -- #4288

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Medford School District #549C to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Medford School District #549C.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Medford School District #549C

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(5.07%)	(5.07%)	(5.07%)
Net pension contribution rate	26.90%	21.51%	26.14%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	26.96%	21.51%	26.14%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Medford School District #549C

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$141,618,508	\$171,679,789
Allocated pooled OPSRP UAL	9,123,029	10,412,288
Side account	25,507,683	25,031,893
Net unfunded pension actuarial accrued liability	125,233,854	157,060,184
Combined valuation payroll	60,541,249	60,479,526
Net pension UAL as a percentage of payroll	207%	260%
Calculated Side Account Rate Relief	(5.07%)	(4.60%)
Allocated Pooled RHIA UAL	(\$693,693)	(\$8,235)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$25,031,893	\$25,031,893
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(3,189,635)	(3,189,635)
5. Side account earnings during 2017		3,665,924	3,665,924
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$25,507,683	\$25,507,683

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$25,507,683	\$25,031,893
Side Account 2	0	0
Side Account 3	0	0
Total	\$25,507,683	\$25,031,893

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, 2017	December 31, 2016
1. Total side account	\$25,507,683	\$25,031,893
2. Combined valuation payroll	60,541,249	60,479,526
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(5.07%)	(4.60%)

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

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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

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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.

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Milton-Freewater Unified School District #7/4335
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Milton-Freewater Unified School District #7/4335

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Milton-Freewater Unified School District #7/4335

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Milton-Freewater Unified School District #7 -- #4335

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Milton-Freewater Unified School District #7 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Milton-Freewater Unified School District #7.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Milton-Freewater Unified School District #7

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(22.23%)	(22.23%)	(22.23%)
Net pension contribution rate	9.74%	4.35%	8.98%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	9.80%	4.35%	8.98%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Milton-Freewater Unified School District #7

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$19,638,662	\$22,657,357
Allocated pooled OPSRP UAL	1,265,118	1,374,157
Side account	15,512,954	15,046,395
Net unfunded pension actuarial accrued liability	5,390,826	8,985,119
Combined valuation payroll	8,395,436	7,981,756
Net pension UAL as a percentage of payroll	64%	113%
Calculated Side Account Rate Relief	(22.23%)	(20.96%)
Allocated Pooled RHIA UAL	(\$96,197)	(\$1,087)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$15,046,395	\$15,046,395
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(1,758,591)	(1,758,591)
5. Side account earnings during 2017		2,226,150	2,226,150
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$15,512,954	\$15,512,954

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$7,170,574	\$6,954,381
Side Account 2	8,342,380	8,092,014
Side Account 3	0	0
Total	\$15,512,954	\$15,046,395

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, 2017	December 31, 2016
1. Total side account	\$15,512,954	\$15,046,395
2. Combined valuation payroll	8,395,436	7,981,756
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(22.23%)	(20.96%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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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October 2018

Molalla River School District/4331
Oregon Public Employees Retirement System

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October 2018
Molalla River School District/4331

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Molalla River School District -- #4331

October 2018

Milliman

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

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Executive Summary

Milliman has prepared this report for Molalla River School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Molalla River School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Molalla River School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(28.82%)	(28.82%)	(28.82%)
Net pension contribution rate	3.15%	0.00%	2.39%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	3.21%	0.00%	2.39%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Molalla River School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$29,229,727	\$35,313,149
Allocated pooled OPSRP UAL	1,882,972	2,141,724
Side account	29,938,673	27,823,245
Net unfunded pension actuarial accrued liability	1,174,026	9,631,628
Combined valuation payroll	12,495,572	12,440,151
Net pension UAL as a percentage of payroll	9%	77%
Calculated Side Account Rate Relief	(28.82%)	(24.87%)
Allocated Pooled RHIA UAL	(\$143,177)	(\$1,694)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$27,823,245	\$27,823,245
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(2,053,400)	(2,053,400)
5. Side account earnings during 2017		4,169,827	4,169,827
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$29,938,673	\$29,938,673

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$12,094,151	\$11,101,355
Side Account 2	17,844,521	16,721,890
Side Account 3	0	0
Total	\$29,938,673	\$27,823,245

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, 2017	December 31, 2016
1. Total side account	\$29,938,673	\$27,823,245
2. Combined valuation payroll	12,495,572	12,440,151
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(28.82%)	(24.87%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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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October 2018

Monroe School District #1J/4340
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Monroe School District #1J/4340

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Monroe School District #1J/4340

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Monroe School District #1J -- #4340

October 2018

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Executive Summary

Milliman has prepared this report for Monroe School District #1J to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Monroe School District #1J.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Monroe School District #1J

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(10.08%)	(10.08%)	(10.08%)
Net pension contribution rate	21.89%	16.50%	21.13%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	21.95%	16.50%	21.13%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Monroe School District #1J

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$5,234,682	\$6,952,118
Allocated pooled OPSRP UAL	337,217	421,642
Side account	1,874,804	1,799,711
Net unfunded pension actuarial accrued liability	3,697,095	5,574,049
Combined valuation payroll	2,237,802	2,449,099
Net pension UAL as a percentage of payroll	165%	228%
Calculated Side Account Rate Relief	(10.08%)	(8.17%)
Allocated Pooled RHIA UAL	(\$25,641)	(\$333)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$1,799,711	\$1,799,711
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(191,646)	(191,646)
5. Side account earnings during 2017		267,239	267,239
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$1,874,804	\$1,874,804

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$1,874,804	\$1,799,711
Side Account 2	0	0
Side Account 3	0	0
Total	\$1,874,804	\$1,799,711

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, 2017	December 31, 2016
1. Total side account	\$1,874,804	\$1,799,711
2. Combined valuation payroll	2,237,802	2,449,099
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(10.08%)	(8.17%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Morrow County Schools/3809
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Morrow County Schools/3809

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Morrow County Schools/3809

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Morrow County Schools -- #3809

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Morrow County Schools to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Morrow County Schools.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Morrow County Schools

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(8.40%)	(8.40%)	(8.40%)
Net pension contribution rate	23.57%	18.18%	22.81%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	23.63%	18.18%	22.81%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

Executive Summary

Accounting Information

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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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Morrow County Schools

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$27,071,600	\$31,144,718
Allocated pooled OPSRP UAL	1,743,946	1,888,911
Side account	8,077,688	7,940,287
Net unfunded pension actuarial accrued liability	20,737,858	25,093,342
Combined valuation payroll	11,572,982	10,971,692
Net pension UAL as a percentage of payroll	179%	229%
Calculated Side Account Rate Relief	(8.40%)	(8.05%)
Allocated Pooled RHIA UAL	(\$132,605)	(\$1,494)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$7,940,287	\$7,940,287
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,026,369)	(1,026,369)
5. Side account earnings during 2017		1,164,270	1,164,270
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$8,077,688	\$8,077,688

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$8,077,688	\$7,940,287
Side Account 2	0	0
Side Account 3	0	0
Total	\$8,077,688	\$7,940,287

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, 2017	December 31, 2016
1. Total side account	\$8,077,688	\$7,940,287
2. Combined valuation payroll	11,572,982	10,971,692
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(8.40%)	(8.05%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

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

Present Value

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

Rate Collar

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

Required Supplementary Information (RSI)

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

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

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

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

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

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

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

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

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

Tier 1/Tier 2 Valuation Payroll

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

Transition Liability

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

Unfunded Accrued Liability (UAL)

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



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

October 2018

Multnomah Education Service District/4238
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Multnomah Education Service District/4238

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Multnomah Education Service District/4238

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

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

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

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

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

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

Sincerely,

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

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

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

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



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Multnomah Education Service District -- #4238

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Multnomah Education Service District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Multnomah Education Service District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Multnomah Education Service District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(17.47%)	(17.47%)	(17.47%)
Net pension contribution rate	14.50%	9.11%	13.74%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	14.56%	9.11%	13.74%

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

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Multnomah Education Service District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$49,017,995	\$56,804,425
Allocated pooled OPSRP UAL	3,157,727	3,445,158
Side account	30,434,470	29,777,710
Net unfunded pension actuarial accrued liability	21,741,252	30,471,873
Combined valuation payroll	20,954,963	20,011,119
Net pension UAL as a percentage of payroll	104%	152%
Calculated Side Account Rate Relief	(17.47%)	(16.55%)
Allocated Pooled RHIA UAL	(\$240,106)	(\$2,725)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$29,777,710	\$29,777,710
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(3,723,862)	(3,723,862)
5. Side account earnings during 2017		4,381,122	4,381,122
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$30,434,470	\$30,434,470

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$30,434,470	\$29,777,710
Side Account 2	0	0
Side Account 3	0	0
Total	\$30,434,470	\$29,777,710

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, 2017	December 31, 2016
1. Total side account	\$30,434,470	\$29,777,710
2. Combined valuation payroll	20,954,963	20,011,119
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(17.47%)	(16.55%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

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

Economic Assumptions

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

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

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

Actuarial Asset Value

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

Actuarial Assumptions

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

Actuarial Cost Method

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

Actuarial Gain or (Loss)

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

Combined Valuation Payroll

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

Cost Sharing Multiple-Employer Plan

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

Employer Contribution Rate

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

Funded Status

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

Normal Cost

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

OPSRP Valuation Payroll

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

Glossary

Pre-SLGRP Liability

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

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Nestucca Valley School District #101/4336
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Nestucca Valley School District #101/4336

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Nestucca Valley School District #101/4336

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Nestucca Valley School District #101 -- #4336

October 2018

Milliman

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Nestucca Valley School District #101 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Nestucca Valley School District #101.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Nestucca Valley School District #101

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(9.27%)	(9.27%)	(9.27%)
Net pension contribution rate	22.70%	17.31%	21.94%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	22.76%	17.31%	21.94%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Nestucca Valley School District #101

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$6,792,963	\$8,265,374
Allocated pooled OPSRP UAL	437,601	501,290
Side account	2,238,175	2,148,080
Net unfunded pension actuarial accrued liability	4,992,389	6,618,584
Combined valuation payroll	2,903,960	2,911,734
Net pension UAL as a percentage of payroll	172%	227%
Calculated Side Account Rate Relief	(9.27%)	(8.20%)
Allocated Pooled RHIA UAL	(\$33,274)	(\$396)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$2,148,080	\$2,148,080
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(226,600)	(226,600)
5. Side account earnings during 2017		317,194	317,194
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$2,238,175	\$2,238,175

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$2,238,175	\$2,148,080
Side Account 2	0	0
Side Account 3	0	0
Total	\$2,238,175	\$2,148,080

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, 2017	December 31, 2016
1. Total side account	\$2,238,175	\$2,148,080
2. Combined valuation payroll	2,903,960	2,911,734
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(9.27%)	(8.20%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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.

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The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Newberg School District #29Jt/4135
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Newberg School District #29Jt/4135

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Newberg School District #29Jt/4135

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Newberg School District #29Jt -- #4135

October 2018

Milliman

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Newberg School District #29Jt to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Newberg School District #29Jt.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Newberg School District #29Jt

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(16.15%)	(16.15%)	(16.15%)
Net pension contribution rate	15.82%	10.43%	15.06%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	15.88%	10.43%	15.06%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Newberg School District #29Jt

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$65,255,176	\$79,836,020
Allocated pooled OPSRP UAL	4,203,722	4,842,012
Side account	37,451,864	36,784,030
Net unfunded pension actuarial accrued liability	32,007,034	47,894,002
Combined valuation payroll	27,896,283	28,124,712
Net pension UAL as a percentage of payroll	115%	170%
Calculated Side Account Rate Relief	(16.15%)	(14.54%)
Allocated Pooled RHIA UAL	(\$319,641)	(\$3,829)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$36,784,030	\$36,784,030
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(4,713,834)	(4,713,834)
5. Side account earnings during 2017		5,382,169	5,382,169
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$37,451,864	\$37,451,864

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$37,451,864	\$36,784,030
Side Account 2	0	0
Side Account 3	0	0
Total	\$37,451,864	\$36,784,030

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, 2017	December 31, 2016
1. Total side account	\$37,451,864	\$36,784,030
2. Combined valuation payroll	27,896,283	28,124,712
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(16.15%)	(14.54%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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.

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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.

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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.

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The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

North Bend Public Schools/3245
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
North Bend Public Schools/3245

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
North Bend Public Schools/3245

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

North Bend Public Schools -- #3245

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for North Bend Public Schools to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to North Bend Public Schools.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for North Bend Public Schools

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(9.71%)	(9.71%)	(9.71%)
Net pension contribution rate	22.26%	16.87%	21.50%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	22.32%	16.87%	21.50%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

North Bend Public Schools

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$25,410,619	\$30,397,859
Allocated pooled OPSRP UAL	1,636,946	1,843,614
Side account	8,765,366	8,598,296
Net unfunded pension actuarial accrued liability	18,282,199	23,643,177
Combined valuation payroll	10,862,921	10,708,588
Net pension UAL as a percentage of payroll	168%	221%
Calculated Side Account Rate Relief	(9.71%)	(8.93%)
Allocated Pooled RHIA UAL	(\$124,469)	(\$1,458)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$8,598,296	\$8,598,296
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,089,013)	(1,089,013)
5. Side account earnings during 2017		1,256,582	1,256,582
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$8,765,366	\$8,765,366

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$8,765,366	\$8,598,296
Side Account 2	0	0
Side Account 3	0	0
Total	\$8,765,366	\$8,598,296

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, 2017	December 31, 2016
1. Total side account	\$8,765,366	\$8,598,296
2. Combined valuation payroll	10,862,921	10,708,588
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(9.71%)	(8.93%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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.

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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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October 2018

North Clackamas School District #12/4321
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

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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.

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- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll, and
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October 2018
North Clackamas School District #12/4321

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
North Clackamas School District #12/4321

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

North Clackamas School District #12 -- #4321

October 2018

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Executive Summary

Milliman has prepared this report for North Clackamas School District #12 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to North Clackamas School District #12.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for North Clackamas School District #12

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(15.28%)	(15.28%)	(15.28%)
Net pension contribution rate	16.69%	11.30%	15.93%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	16.75%	11.30%	15.93%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

North Clackamas School District #12

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$221,784,895	\$260,792,327
Allocated pooled OPSRP UAL	14,287,327	15,816,915
Side account	120,416,390	118,876,444
Net unfunded pension actuarial accrued liability	115,655,832	157,732,798
Combined valuation payroll	94,812,004	91,872,179
Net pension UAL as a percentage of payroll	122%	172%
Calculated Side Account Rate Relief	(15.28%)	(14.39%)
Allocated Pooled RHIA UAL	(\$1,086,374)	(\$12,509)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$118,876,444	\$118,876,444
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(15,764,856)	(15,764,856)
5. Side account earnings during 2017		17,305,802	17,305,802
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$120,416,390	\$120,416,390

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$53,951,887	\$53,257,854
Side Account 2	66,464,503	65,618,591
Side Account 3	0	0
Total	\$120,416,390	\$118,876,444

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, 2017	December 31, 2016
1. Total side account	\$120,416,390	\$118,876,444
2. Combined valuation payroll	94,812,004	91,872,179
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(15.28%)	(14.39%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

North Marion School District #15/3730
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
North Marion School District #15/3730

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
North Marion School District #15/3730

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

North Marion School District #15 -- #3730

October 2018

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Executive Summary

Milliman has prepared this report for North Marion School District #15 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to North Marion School District #15.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for North Marion School District #15

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(14.31%)	(14.31%)	(14.31%)
Net pension contribution rate	17.66%	12.27%	16.90%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	17.72%	12.27%	16.90%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

North Marion School District #15

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$23,281,378	\$27,272,916
Allocated pooled OPSRP UAL	1,499,780	1,654,088
Side account	11,835,847	11,570,201
Net unfunded pension actuarial accrued liability	12,945,311	17,356,803
Combined valuation payroll	9,952,680	9,607,730
Net pension UAL as a percentage of payroll	130%	181%
Calculated Side Account Rate Relief	(14.31%)	(13.39%)
Allocated Pooled RHIA UAL	(\$114,040)	(\$1,308)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$11,570,201	\$11,570,201
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,427,829)	(1,427,829)
5. Side account earnings during 2017		1,693,975	1,693,975
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$11,835,847	\$11,835,847

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$11,835,847	\$11,570,201
Side Account 2	0	0
Side Account 3	0	0
Total	\$11,835,847	\$11,570,201

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, 2017	December 31, 2016
1. Total side account	\$11,835,847	\$11,570,201
2. Combined valuation payroll	9,952,680	9,607,730
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(14.31%)	(13.39%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

North Santiam School District #29J/4342
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
North Santiam School District #29J/4342

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
North Santiam School District #29J/4342

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

North Santiam School District #29J -- #4342

October 2018

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Executive Summary

Milliman has prepared this report for North Santiam School District #29J to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to North Santiam School District #29J.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for North Santiam School District #29J

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(18.46%)	(18.46%)	(18.46%)
Net pension contribution rate	13.51%	8.12%	12.75%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	13.57%	8.12%	12.75%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

North Santiam School District #29J

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$25,875,679	\$31,140,735
Allocated pooled OPSRP UAL	1,666,905	1,888,669
Side account	16,973,764	16,481,209
Net unfunded pension actuarial accrued liability	10,568,820	16,548,195
Combined valuation payroll	11,061,732	10,970,289
Net pension UAL as a percentage of payroll	96%	151%
Calculated Side Account Rate Relief	(18.46%)	(16.70%)
Allocated Pooled RHIA UAL	(\$126,747)	(\$1,494)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$16,481,209	\$16,481,209
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,927,207)	(1,927,207)
5. Side account earnings during 2017		2,420,261	2,420,261
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$16,973,764	\$16,973,764

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$16,973,764	\$16,481,209
Side Account 2	0	0
Side Account 3	0	0
Total	\$16,973,764	\$16,481,209

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, 2017	December 31, 2016
1. Total side account	\$16,973,764	\$16,481,209
2. Combined valuation payroll	11,061,732	10,970,289
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(18.46%)	(16.70%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

North Wasco County School District #21/4381
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
North Wasco County School District #21/4381

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
North Wasco County School District #21/4381

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

North Wasco County School District #21 -- #4381

October 2018

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Executive Summary

Milliman has prepared this report for North Wasco County School District #21 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to North Wasco County School District #21.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for North Wasco County School District #21

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(13.86%)	(13.86%)	(13.86%)
Net pension contribution rate	18.11%	12.72%	17.35%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	18.17%	12.72%	17.35%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

North Wasco County School District #21

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$32,987,784	\$41,276,360
Allocated pooled OPSRP UAL	2,125,065	2,503,389
Side account	16,243,855	15,766,153
Net unfunded pension actuarial accrued liability	18,868,994	28,013,596
Combined valuation payroll	14,102,123	14,540,877
Net pension UAL as a percentage of payroll	134%	193%
Calculated Side Account Rate Relief	(13.86%)	(12.06%)
Allocated Pooled RHIA UAL	(\$161,585)	(\$1,980)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$15,766,153	\$15,766,153
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,842,175)	(1,842,175)
5. Side account earnings during 2017		2,320,377	2,320,377
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$16,243,855	\$16,243,855

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$16,243,855	\$15,766,153
Side Account 2	0	0
Side Account 3	0	0
Total	\$16,243,855	\$15,766,153

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, 2017	December 31, 2016
1. Total side account	\$16,243,855	\$15,766,153
2. Combined valuation payroll	14,102,123	14,540,877
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(13.86%)	(12.06%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Ontario School District #8C/3684
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Ontario School District #8C/3684

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Ontario School District #8C/3684

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Ontario School District #8C -- #3684

October 2018

Milliman

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Ontario School District #8C to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Ontario School District #8C.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Ontario School District #8C

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(10.15%)	(10.15%)	(10.15%)
Net pension contribution rate	21.82%	16.43%	21.06%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	21.88%	16.43%	21.06%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Ontario School District #8C

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$30,175,970	\$35,079,361
Allocated pooled OPSRP UAL	1,943,928	2,127,545
Side account	10,886,596	10,563,385
Net unfunded pension actuarial accrued liability	21,233,302	26,643,521
Combined valuation payroll	12,900,086	12,357,792
Net pension UAL as a percentage of payroll	165%	216%
Calculated Side Account Rate Relief	(10.15%)	(9.50%)
Allocated Pooled RHIA UAL	(\$147,812)	(\$1,683)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$10,563,385	\$10,563,385
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,229,985)	(1,229,985)
5. Side account earnings during 2017		1,553,696	1,553,696
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$10,886,596	\$10,886,596

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$10,886,596	\$10,563,385
Side Account 2	0	0
Side Account 3	0	0
Total	\$10,886,596	\$10,563,385

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, 2017	December 31, 2016
1. Total side account	\$10,886,596	\$10,563,385
2. Combined valuation payroll	12,900,086	12,357,792
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(10.15%)	(9.50%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Oregon City School District #62/3122
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Oregon City School District #62/3122

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Oregon City School District #62/3122

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Oregon City School District #62 -- #3122

October 2018

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Executive Summary

Milliman has prepared this report for Oregon City School District #62 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Oregon City School District #62.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Oregon City School District #62

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(10.98%)	(10.98%)	(10.98%)
Net pension contribution rate	20.99%	15.60%	20.23%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	21.05%	15.60%	20.23%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Oregon City School District #62

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$99,258,530	\$119,410,741
Allocated pooled OPSRP UAL	6,394,209	7,242,198
Side account	38,719,892	37,282,327
Net unfunded pension actuarial accrued liability	66,932,847	89,370,612
Combined valuation payroll	42,432,557	42,066,134
Net pension UAL as a percentage of payroll	158%	212%
Calculated Side Account Rate Relief	(10.98%)	(9.85%)
Allocated Pooled RHIA UAL	(\$486,200)	(\$5,728)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$37,282,327	\$37,282,327
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(4,084,851)	(4,084,851)
5. Side account earnings during 2017		5,522,915	5,522,915
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$38,719,892	\$38,719,892

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$38,719,892	\$37,282,327
Side Account 2	0	0
Side Account 3	0	0
Total	\$38,719,892	\$37,282,327

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, 2017	December 31, 2016
1. Total side account	\$38,719,892	\$37,282,327
2. Combined valuation payroll	42,432,557	42,066,134
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(10.98%)	(9.85%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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)

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Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Pendleton School District #16R/3931
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Pendleton School District #16R/3931

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Pendleton School District #16R/3931

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Pendleton School District #16R -- #3931

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Pendleton School District #16R to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Pendleton School District #16R.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Pendleton School District #16R

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(23.32%)	(23.32%)	(23.32%)
Net pension contribution rate	8.65%	3.26%	7.89%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	8.71%	3.26%	7.89%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Pendleton School District #16R

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$36,832,092	\$46,131,697
Allocated pooled OPSRP UAL	2,372,714	2,797,863
Side account	30,519,742	29,594,925
Net unfunded pension actuarial accrued liability	8,685,064	19,334,635
Combined valuation payroll	15,745,547	16,251,320
Net pension UAL as a percentage of payroll	55%	119%
Calculated Side Account Rate Relief	(23.32%)	(20.24%)
Allocated Pooled RHIA UAL	(\$180,416)	(\$2,213)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$29,594,925	\$29,594,925
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(3,447,381)	(3,447,381)
5. Side account earnings during 2017		4,373,197	4,373,197
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$30,519,742	\$30,519,742

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$13,410,738	\$13,014,842
Side Account 2	17,109,004	16,580,084
Side Account 3	0	0
Total	\$30,519,742	\$29,594,925

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, 2017	December 31, 2016
1. Total side account	\$30,519,742	\$29,594,925
2. Combined valuation payroll	15,745,547	16,251,320
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(23.32%)	(20.24%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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.

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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.

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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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October 2018

Philomath School District #17J/3043
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

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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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
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- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Philomath School District #17J/3043

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Philomath School District #17J/3043

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Philomath School District #17J -- #3043

October 2018

Milliman

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Philomath School District #17J to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Philomath School District #17J.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Philomath School District #17J

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(10.78%)	(10.78%)	(10.78%)
Net pension contribution rate	21.19%	15.80%	20.43%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	21.25%	15.80%	20.43%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Philomath School District #17J

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$17,149,998	\$18,547,407
Allocated pooled OPSRP UAL	1,104,799	1,124,890
Side account	6,570,304	6,523,682
Net unfunded pension actuarial accrued liability	11,684,493	13,148,615
Combined valuation payroll	7,331,544	6,533,899
Net pension UAL as a percentage of payroll	159%	201%
Calculated Side Account Rate Relief	(10.78%)	(11.10%)
Allocated Pooled RHIA UAL	(\$84,006)	(\$890)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$6,523,682	\$6,523,682
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(900,428)	(900,428)
5. Side account earnings during 2017		947,550	947,550
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$6,570,304	\$6,570,304

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$6,570,304	\$6,523,682
Side Account 2	0	0
Side Account 3	0	0
Total	\$6,570,304	\$6,523,682

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, 2017	December 31, 2016
1. Total side account	\$6,570,304	\$6,523,682
2. Combined valuation payroll	7,331,544	6,533,899
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(10.78%)	(11.10%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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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October 2018

Phoenix-Talent School District/3414
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Phoenix-Talent School District/3414

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Phoenix-Talent School District/3414

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a long horizontal flourish extending to the right.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a long horizontal flourish extending to the right.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Phoenix-Talent School District -- #3414

October 2018

Milliman

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Executive Summary

Milliman has prepared this report for Phoenix-Talent School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Phoenix-Talent School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Phoenix-Talent School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(13.06%)	(13.06%)	(13.06%)
Net pension contribution rate	18.91%	13.52%	18.15%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	18.97%	13.52%	18.15%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Phoenix-Talent School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$27,856,822	\$32,322,278
Allocated pooled OPSRP UAL	1,794,529	1,960,329
Side account	12,927,894	12,661,035
Net unfunded pension actuarial accrued liability	16,723,457	21,621,572
Combined valuation payroll	11,908,661	11,386,524
Net pension UAL as a percentage of payroll	140%	190%
Calculated Side Account Rate Relief	(13.06%)	(12.36%)
Allocated Pooled RHIA UAL	(\$136,452)	(\$1,550)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$12,661,035	\$12,661,035
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(1,583,489)	(1,583,489)
5. Side account earnings during 2017		1,850,848	1,850,848
6. Side account as of December 31, 2017 <i>(1. + 2. + 3. + 4. + 5.)</i>		\$12,927,894	\$12,927,894

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$12,927,894	\$12,661,035
Side Account 2	0	0
Side Account 3	0	0
Total	\$12,927,894	\$12,661,035

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, 2017	December 31, 2016
1. Total side account	\$12,927,894	\$12,661,035
2. Combined valuation payroll	11,908,661	11,386,524
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(13.06%)	(12.36%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Pilot Rock School District #2R/3958
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018

Pilot Rock School District #2R/3958

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Pilot Rock School District #2R/3958

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Pilot Rock School District #2R -- #3958

October 2018

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Executive Summary

Milliman has prepared this report for Pilot Rock School District #2R to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Pilot Rock School District #2R.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Pilot Rock School District #2R

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(15.06%)	(15.06%)	(15.06%)
Net pension contribution rate	16.91%	11.52%	16.15%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	16.97%	11.52%	16.15%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Pilot Rock School District #2R

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$4,196,236	\$4,960,475
Allocated pooled OPSRP UAL	270,320	300,850
Side account	2,244,822	2,156,436
Net unfunded pension actuarial accrued liability	2,221,734	3,104,889
Combined valuation payroll	1,793,871	1,747,481
Net pension UAL as a percentage of payroll	124%	178%
Calculated Side Account Rate Relief	(15.06%)	(13.72%)
Allocated Pooled RHIA UAL	(\$20,555)	(\$238)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$2,156,436	\$2,156,436
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(229,696)	(229,696)
5. Side account earnings during 2017		318,582	318,582
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$2,244,822	\$2,244,822

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$2,244,822	\$2,156,436
Side Account 2	0	0
Side Account 3	0	0
Total	\$2,244,822	\$2,156,436

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, 2017	December 31, 2016
1. Total side account	\$2,244,822	\$2,156,436
2. Combined valuation payroll	1,793,871	1,747,481
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(15.06%)	(13.72%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Portland Public Schools/3818
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Portland Public Schools/3818

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Portland Public Schools/3818

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Portland Public Schools -- #3818

October 2018

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Executive Summary

Milliman has prepared this report for Portland Public Schools to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Portland Public Schools.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Portland Public Schools

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(23.22%)	(23.22%)	(23.22%)
Net pension contribution rate	8.75%	3.36%	7.99%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	8.81%	3.36%	7.99%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Portland Public Schools

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$735,594,609	\$904,736,197
Allocated pooled OPSRP UAL	47,386,819	54,871,768
Side account	606,925,156	588,164,140
Net unfunded pension actuarial accrued liability	176,056,272	371,443,825
Combined valuation payroll	314,463,253	318,721,363
Net pension UAL as a percentage of payroll	56%	117%
Calculated Side Account Rate Relief	(23.22%)	(20.52%)
Allocated Pooled RHIA UAL	(\$3,603,181)	(\$43,397)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
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Actuarial accrued liability	\$29,677.4	\$29,152.2
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▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
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▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
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Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
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General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
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Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$588,164,140	\$588,164,140
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(68,321,339)	(68,321,339)
5. Side account earnings during 2017		87,083,355	87,083,355
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$606,925,156	\$606,925,156

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$260,086,147	\$248,255,353
Side Account 2	346,839,010	339,908,787
Side Account 3	0	0
Total	\$606,925,156	\$588,164,140

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, 2017	December 31, 2016
1. Total side account	\$606,925,156	\$588,164,140
2. Combined valuation payroll	314,463,253	318,721,363
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(23.22%)	(20.52%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Rainier School District #13/4320
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Rainier School District #13/4320

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Rainier School District #13/4320

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Rainier School District #13 -- #4320

October 2018

Milliman

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Rainier School District #13 to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Rainier School District #13.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Rainier School District #13

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(16.53%)	(16.53%)	(16.53%)
Net pension contribution rate	15.44%	10.05%	14.68%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	15.50%	10.05%	14.68%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Rainier School District #13

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$10,133,215	\$12,995,904
Allocated pooled OPSRP UAL	652,779	788,195
Side account	5,953,534	5,719,954
Net unfunded pension actuarial accrued liability	4,832,460	8,064,145
Combined valuation payroll	4,331,902	4,578,210
Net pension UAL as a percentage of payroll	112%	176%
Calculated Side Account Rate Relief	(16.53%)	(13.89%)
Allocated Pooled RHIA UAL	(\$49,636)	(\$623)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$5,719,954	\$5,719,954
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(614,613)	(614,613)
5. Side account earnings during 2017		848,693	848,693
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$5,953,534	\$5,953,534

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$5,953,534	\$5,719,954
Side Account 2	0	0
Side Account 3	0	0
Total	\$5,953,534	\$5,719,954

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, 2017	December 31, 2016
1. Total side account	\$5,953,534	\$5,719,954
2. Combined valuation payroll	4,331,902	4,578,210
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(16.53%)	(13.89%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Redmond School District #2J/4311
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Redmond School District #2J/4311

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Redmond School District #2J/4311

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Redmond School District #2J -- #4311

October 2018

Milliman

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Redmond School District #2J to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Redmond School District #2J.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Redmond School District #2J

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(8.75%)	(8.75%)	(8.75%)
Net pension contribution rate	23.22%	17.83%	22.46%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	23.28%	17.83%	22.46%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Redmond School District #2J

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$83,452,487	\$96,875,480
Allocated pooled OPSRP UAL	5,375,988	5,875,446
Side account	25,961,152	25,502,428
Net unfunded pension actuarial accrued liability	62,867,323	77,248,498
Combined valuation payroll	35,675,548	34,127,390
Net pension UAL as a percentage of payroll	176%	226%
Calculated Side Account Rate Relief	(8.75%)	(8.31%)
Allocated Pooled RHIA UAL	(\$408,777)	(\$4,647)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$25,502,428	\$25,502,428
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(3,288,168)	(3,288,168)
5. Side account earnings during 2017		3,747,392	3,747,392
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$25,961,152	\$25,961,152

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$25,961,152	\$25,502,428
Side Account 2	0	0
Side Account 3	0	0
Total	\$25,961,152	\$25,502,428

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, 2017	December 31, 2016
1. Total side account	\$25,961,152	\$25,502,428
2. Combined valuation payroll	35,675,548	34,127,390
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(8.75%)	(8.31%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Reedsport School District/4312
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Reedsport School District/4312

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Reedsport School District/4312

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Reedsport School District -- #4312

October 2018

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Executive Summary

Milliman has prepared this report for Reedsport School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Reedsport School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Reedsport School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(13.94%)	(13.94%)	(13.94%)
Net pension contribution rate	18.03%	12.64%	17.27%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	18.09%	12.64%	17.27%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Reedsport School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$6,977,129	\$8,868,256
Allocated pooled OPSRP UAL	449,465	537,855
Side account	3,456,727	3,476,808
Net unfunded pension actuarial accrued liability	3,969,867	5,929,303
Combined valuation payroll	2,982,690	3,124,118
Net pension UAL as a percentage of payroll	133%	190%
Calculated Side Account Rate Relief	(13.94%)	(12.37%)
Allocated Pooled RHIA UAL	(\$34,176)	(\$425)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$3,476,808	\$3,476,808
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(528,950)	(528,950)
5. Side account earnings during 2017		509,370	509,370
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$3,456,727	\$3,456,727

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$3,456,727	\$3,476,808
Side Account 2	0	0
Side Account 3	0	0
Total	\$3,456,727	\$3,476,808

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, 2017	December 31, 2016
1. Total side account	\$3,456,727	\$3,476,808
2. Combined valuation payroll	2,982,690	3,124,118
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(13.94%)	(12.37%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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.

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The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Reynolds School District/3824
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Reynolds School District/3824

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Reynolds School District/3824

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Reynolds School District -- #3824

October 2018

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Executive Summary

Milliman has prepared this report for Reynolds School District to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Reynolds School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Reynolds School District

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(16.59%)	(16.59%)	(16.59%)
Net pension contribution rate	15.38%	9.99%	14.62%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	15.44%	9.99%	14.62%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Reynolds School District

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$150,551,536	\$188,184,832
Allocated pooled OPSRP UAL	9,698,492	11,413,310
Side account	88,746,649	85,788,788
Net unfunded pension actuarial accrued liability	71,503,379	113,809,354
Combined valuation payroll	64,360,077	66,293,939
Net pension UAL as a percentage of payroll	111%	172%
Calculated Side Account Rate Relief	(16.59%)	(14.39%)
Allocated Pooled RHIA UAL	(\$737,450)	(\$9,027)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$85,788,788	\$85,788,788
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(9,686,230)	(9,686,230)
5. Side account earnings during 2017		12,644,591	12,644,591
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$88,746,649	\$88,746,649

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$88,746,649	\$85,788,788
Side Account 2	0	0
Side Account 3	0	0
Total	\$88,746,649	\$85,788,788

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, 2017	December 31, 2016
1. Total side account	\$88,746,649	\$85,788,788
2. Combined valuation payroll	64,360,077	66,293,939
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(16.59%)	(14.39%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Riverdale School/3847
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

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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

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- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll, and
- A summary of principal valuation results.

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- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Riverdale School/3847

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Riverdale School/3847

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a long horizontal flourish extending to the right.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a long horizontal flourish extending to the right.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Riverdale School -- #3847

October 2018

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Executive Summary

Milliman has prepared this report for Riverdale School to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Riverdale School.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Riverdale School

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(10.85%)	(10.85%)	(10.85%)
Net pension contribution rate	21.12%	15.73%	20.36%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	21.18%	15.73%	20.36%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Riverdale School

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$11,224,576	\$13,056,751
Allocated pooled OPSRP UAL	723,084	791,885
Side account	4,327,311	4,281,235
Net unfunded pension actuarial accrued liability	7,620,349	9,567,401
Combined valuation payroll	4,798,454	4,599,645
Net pension UAL as a percentage of payroll	159%	208%
Calculated Side Account Rate Relief	(10.85%)	(10.35%)
Allocated Pooled RHIA UAL	(\$54,982)	(\$626)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$4,281,235	\$4,281,235
2. Deposits during 2017			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2017		(579,841)	(579,841)
5. Side account earnings during 2017		626,418	626,418
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$4,327,311	\$4,327,311

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$4,327,311	\$4,281,235
Side Account 2	0	0
Side Account 3	0	0
Total	\$4,327,311	\$4,281,235

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, 2017	December 31, 2016
1. Total side account	\$4,327,311	\$4,281,235
2. Combined valuation payroll	4,798,454	4,599,645
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(10.85%)	(10.35%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

October 2018

Roseburg Public Schools/3310
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, 2017. 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, 2019. Information to assist you in preparing your required financial reporting disclosures under Statement 68 and Statement 75 of the Governmental Accounting Standards Board (GASB) will be provided separately by PERS and is not included in this report.

This report reflects the benefit provisions in effect as of December 31, 2017. The full development of the valuation results for the Tier 1/Tier 2 School District Pool, OPSRP, and the Retiree Health Insurance Account (RHIA) 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, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- 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/Financials/Actuarial-Financial-Information.aspx.



October 2018
Roseburg Public Schools/3310

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 July 2017.

The actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2019 to June 2021 for System employers. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and with our understanding of the System benefit provisions described in the appendixes of this report. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



October 2018
Roseburg Public Schools/3310

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2017

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Roseburg Public Schools -- #3310

October 2018

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Executive Summary

Milliman has prepared this report for Roseburg Public Schools to:

- Provide summary December 31, 2017 valuation results for the Tier 1/Tier 2 School District Pool, Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance Account (RHIA),
- Provide employer-specific contribution rates effective July 1, 2019 through June 30, 2021, and
- Provide employer-specific information on side accounts as of December 31, 2017.

This report summarizes the valuation results for the School District Pool, OPSRP, and RHIA. The full development of these results can be found in the December 31, 2017 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Roseburg Public Schools.

Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2019 through June 30, 2021 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, 2019 for Roseburg Public Schools

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
Pension			
Normal cost rate	13.79%	8.40%	13.03%
Tier 1/Tier 2 UAL rate ¹	16.73%	16.73%	16.73%
OPSRP UAL rate	1.45%	1.45%	1.45%
Side account rate relief ²	(15.24%)	(15.24%)	(15.24%)
Net pension contribution rate	16.73%	11.34%	15.97%
Retiree Healthcare			
Normal cost rate	0.06%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	0.06%	0.00%	0.00%
Total net employer contribution rate	16.79%	11.34%	15.97%

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 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 2021 to June 2023 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 side accounts. The table below shows the possible minimum and maximum rates for the School District Pool first effective as of July 1, 2021, which will depend on the funded status as of December 31, 2019. 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.

For comparison, the Pool's funded status as of December 31, 2017 is 74%.

Funded Status as of December 31, 2019	70% to 130%	Under 60% or Over 140%
2019-2021 Tier 1/Tier 2 Normal Cost + Tier 1/Tier 2 UAL Rate	30.52%	30.52%
Minimum 2021-2023 Rate	24.42%	18.32%
Maximum 2021-2023 Rate	36.62%	42.72%

For individual school districts, the School District Pool rate is adjusted for any rate relief provided by a side account rate offset.

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.

Retiree Healthcare

In June 2015, the GASB issued Statement 75, which replaced GASB 45 and governs 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 the Retiree Health Insurance Account (RHIA) 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.

District-specific valuation results are only shown for districts with a side account as valuation results for districts without a side account are fully summarized by the School District Pool results, which are shown on the next page.

Roseburg Public Schools

	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Allocated pooled T1/T2 UAL	\$65,769,104	\$79,244,412
Allocated pooled OPSRP UAL	4,236,829	4,806,131
Side account	35,632,245	34,625,408
Net unfunded pension actuarial accrued liability	34,373,688	49,425,135
Combined valuation payroll	28,115,984	27,916,300
Net pension UAL as a percentage of payroll	122%	177%
Calculated Side Account Rate Relief	(15.24%)	(13.79%)
Allocated Pooled RHIA UAL	(\$322,158)	(\$3,801)

In the above exhibit, UAL amounts for the various pools (School District Tier 1/Tier 2 Pension, OPSRP, and RHIA) 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)

School District Pool

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$199.0	\$215.1
Tier 1/Tier 2 valuation payroll	1,443.7	1,532.7
Normal cost rate	13.79%	14.04%
Actuarial accrued liability	\$29,677.4	\$29,152.2
Actuarial asset value	21,924.7	19,952.9
Unfunded actuarial accrued liability	7,752.7	9,199.2
Funded status	74%	68%
Combined valuation payroll	\$3,314.2	\$3,240.7
UAL as a percentage of payroll	234%	284%
UAL rate (includes Multnomah Fire District #10)	16.73%	17.50%
Tier 1/Tier 2 Active Members		
▪ Count	23,753	26,180
▪ Average Age	52.8	52.6
▪ Average Service	19.7	19.2
▪ Average Valuation Payroll	\$60,781	\$58,545
Tier 1/Tier 2 Dormant Members		
▪ Count	12,003	12,865
▪ Average Age	56.1	55.8
▪ Average Monthly Benefit	\$1,004	\$993
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	67,545	65,696
▪ Average Age	72.4	72.2
▪ Average Monthly Benefit	\$2,236	\$2,191

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
General service normal cost	\$435.7	\$402.9
OPSRP general service valuation payroll	5,187.5	4,746.4
General service normal cost rate	8.40%	8.49%
Police and fire normal cost	\$86.6	\$80.6
OPSRP police and fire valuation payroll	664.5	609.4
Police and fire normal cost rate	13.03%	13.22%
Actuarial accrued liability	\$5,634.7	\$4,717.0
Actuarial asset value	4,116.5	3,021.4
Unfunded actuarial accrued liability	1,518.2	1,695.6
Funded status	73%	64%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	15%	17%
UAL rate	1.45%	1.56%

Retiree Healthcare

RHIA (\$ in millions)	Actuarial Valuation as of	
	December 31, 2017	December 31, 2016
Normal cost	\$2.5	\$3.0
Tier 1 / Tier 2 valuation payroll	4,246.9	4,516.7
Normal cost rate	0.06%	0.07%
Actuarial accrued liability	\$437.6	\$463.7
Actuarial asset value	553.3	465.0
Unfunded actuarial accrued liability	(115.7)	(1.3)
Funded status	126%	100%
Combined valuation payroll	\$10,098.9	\$9,872.6
UAL as a percentage of payroll	(1%)	0%
UAL rate	0.00%	0.42%

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, 2016	N/A	\$34,625,408	\$34,625,408
2. Deposits during 2017			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2017		(4,111,718)	(4,111,718)
5. Side account earnings during 2017		5,119,555	5,119,555
6. Side account as of December 31, 2017 (1. + 2. + 3. + 4. + 5.)		\$35,632,245	\$35,632,245

Side Account Information

Side Account Balances

	December 31, 2017	December 31, 2016
Side Account 1	\$22,885,489	\$22,239,914
Side Account 2	12,746,756	12,385,494
Side Account 3	0	0
Total	\$35,632,245	\$34,625,408

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, 2017	December 31, 2016
1. Total side account	\$35,632,245	\$34,625,408
2. Combined valuation payroll	28,115,984	27,916,300
3. Average amortization factor	8.312	8.994
4. Total side account rate (-1. ÷ 2. ÷ 3.) ¹	(15.24%)	(13.79%)

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, 2017 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	<p>The UAL is amortized as a level percentage of combined payroll.</p> <p>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.</p>
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	<p>Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.</p>

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.20% compounded annually on system assets.
<i>Interest crediting</i>	<p>7.20% compounded annually on members' regular account balances.</p> <p>7.20% compounded annually on members' variable account balances.</p>
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.5% in 2018 to 4.2% in 2093.
<i>Administrative Expenses</i>	<p>\$6.5 million added to OPSRP normal cost.</p> <p>\$37.5 million added to Tier 1/Tier 2 normal cost.</p>

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2016 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, 2016 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, 2016 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, 2016 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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