Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Hermiston School District #8R/4258
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
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,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Hermiston School District #8R -- #4258

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Hermiston School District #8R

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(8.78%)	(8.78%)	(8.78%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**21.21%**	**18.03%**	**22.40%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**21.26%**	**18.03%**	**22.40%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$69,029,869	$58,298,242
Allocated pooled OPSRP UAL	4,879,525	3,755,558
Side account	18,052,019	20,645,300
Net unfunded pension actuarial accrued liability	55,857,375	41,408,500
Combined valuation payroll	27,023,814	24,922,226
Net pension UAL as a percentage of payroll	207%	166%
Calculated Side Account Rate Relief	(8.78%)	(9.97%)
Allocated Pooled RHIA UAL	($396,109)	($285,564)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$20,645,300**	**$20,645,300**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(2,714,874)	(2,714,874)
5. Side account earnings during 2018		122,593	122,593
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$18,052,019**	**$18,052,019**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$11,837,491	$13,541,367
Side Account 2	6,214,528	7,103,933
Side Account 3	0	0
Total	**$18,052,019**	**$20,645,300**

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, 2018	December 31, 2017
1. Total side account	$18,052,019	$20,645,300
2. Combined valuation payroll	27,023,814	24,922,226
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	(8.78%)	(9.97%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Clackamas Education Service District/4259
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

December 2019
Clackamas Education Service District/4259

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
Clackamas Education Service District/4259

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Clackamas Education Service District -- #4259

December 2019

CONTENTS

Executive Summary 1

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information 7

Brief Summary of Actuarial Methods and Assumptions 9

Brief Summary of Changes in Plan Provisions 11

Glossary 12

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Clackamas Education Service District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Clackamas Education Service District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(11.84%)	(11.84%)	(11.84%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**18.15%**	**14.97%**	**19.34%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**18.20%**	**14.97%**	**19.34%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Clackamas Education Service District

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$41,056,483	$34,822,523
Allocated pooled OPSRP UAL	2,902,166	2,243,258
Side account	14,479,776	16,138,646
Net unfunded pension actuarial accrued liability	29,478,873	20,927,135
Combined valuation payroll	16,072,792	14,886,466
Net pension UAL as a percentage of payroll	183%	141%
Calculated Side Account Rate Relief	(11.84%)	(13.04%)
Allocated Pooled RHIA UAL	($235,591)	($170,572)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$16,138,646**	**$16,138,646**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(1,752,420)	(1,752,420)
5. Side account earnings during 2018		94,050	94,050
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$14,479,776**	**$14,479,776**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$14,479,776	$16,138,646
Side Account 2	0	0
Side Account 3	0	0
Total	**$14,479,776**	**$16,138,646**

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, 2018	December 31, 2017
1. Total side account	$14,479,776	$16,138,646
2. Combined valuation payroll	16,072,792	14,886,466
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(11.84%)	(13.04%)

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

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Greater Albany School District #8J/4260
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Greater Albany School District #8J -- #4260

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Greater Albany School District #8J

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(7.97%)	(7.97%)	(7.97%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**22.02%**	**18.84%**	**23.21%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**22.07%**	**18.84%**	**23.21%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$134,953,859	$115,369,054
Allocated pooled OPSRP UAL	9,539,505	7,432,045
Side account	32,012,542	36,442,789
Net unfunded pension actuarial accrued liability	112,480,822	86,358,310
Combined valuation payroll	52,831,738	49,319,730
Net pension UAL as a percentage of payroll	213%	175%
Calculated Side Account Rate Relief	(7.97%)	(8.89%)
Allocated Pooled RHIA UAL	($774,396)	($565,115)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$36,442,789**	**$36,442,789**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(4,655,778)	(4,655,778)
5. Side account earnings during 2018		226,031	226,031
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$32,012,542**	**$32,012,542**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$32,012,542	$36,442,789
Side Account 2	0	0
Side Account 3	0	0
Total	**$32,012,542**	**$36,442,789**

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, 2018	December 31, 2017
1. Total side account	$32,012,542	$36,442,789
2. Combined valuation payroll	52,831,738	49,319,730
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(7.97%)	(8.89%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Lake Oswego School District/4268
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

Matt Larrabee

Scott Preppernau

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Lake Oswego School District -- #4268

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Lake Oswego School District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Lake Oswego School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(12.00%)	(12.00%)	(12.00%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**17.99%**	**14.81%**	**19.18%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**18.04%**	**14.81%**	**19.18%**

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

[1] *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

[2] *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

[3] *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$108,334,147	$91,594,747
Allocated pooled OPSRP UAL	7,657,833	5,900,511
Side account	38,727,854	44,729,878
Net unfunded pension actuarial accrued liability	77,264,126	52,765,380
Combined valuation payroll	42,410,653	39,156,326
Net pension UAL as a percentage of payroll	182%	135%
Calculated Side Account Rate Relief	(12.00%)	(13.75%)
Allocated Pooled RHIA UAL	($621,646)	($448,661)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$44,729,878**	**$44,729,878**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(6,279,727)	(6,279,727)
5. Side account earnings during 2018		278,702	278,702
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$38,727,854**	**$38,727,854**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$23,520,763	$27,166,952
Side Account 2	15,207,091	17,562,927
Side Account 3	0	0
Total	**$38,727,854**	**$44,729,878**

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, 2018	December 31, 2017
1. Total side account	$38,727,854	$44,729,878
2. Combined valuation payroll	42,410,653	39,156,326
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(12.00%)	(13.75%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	\$8.0 million, added to OPSRP normal cost. \$32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Silver Falls School District/4270
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

December 2019
Silver Falls School District/4270

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
Silver Falls School District/4270

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Silver Falls School District -- #4270

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Silver Falls School District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Silver Falls School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Silver Falls School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(9.94%)	(9.94%)	(9.94%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**20.05%**	**16.87%**	**21.24%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**20.10%**	**16.87%**	**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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Silver Falls School District

	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$51,406,194	$45,334,758
Allocated pooled OPSRP UAL	3,633,758	2,920,454
Side account	15,206,572	17,433,348
Net unfunded pension actuarial accrued liability	39,833,380	30,821,864
Combined valuation payroll	20,124,497	19,380,397
Net pension UAL as a percentage of payroll	198%	159%
Calculated Side Account Rate Relief	(9.94%)	(10.82%)
Allocated Pooled RHIA UAL	($294,980)	($222,064)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$17,433,348**	**$17,433,348**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(2,330,786)	(2,330,786)
5. Side account earnings during 2018		105,010	105,010
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$15,206,572**	**$15,206,572**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$12,500,510	$14,376,238
Side Account 2	2,706,062	3,057,110
Side Account 3	0	0
Total	**$15,206,572**	**$17,433,348**

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, 2018	December 31, 2017
1. Total side account	$15,206,572	$17,433,348
2. Combined valuation payroll	20,124,497	19,380,397
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	(9.94%)	(10.82%)

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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Lane County Education Service District/4276
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

Milliman

December 2019
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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
Lane County Education Service District/4276

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Lane County Education Service District -- #4276

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Lane County Education Service District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Lane County Education Service District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Lane County Education Service District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(7.89%)	(7.89%)	(7.89%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**22.10%**	**18.92%**	**23.29%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**22.15%**	**18.92%**	**23.29%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$21,225,400	$18,764,139
Allocated pooled OPSRP UAL	1,500,363	1,208,781
Side account	4,985,485	5,661,047
Net unfunded pension actuarial accrued liability	17,740,278	14,311,873
Combined valuation payroll	8,309,320	8,021,582
Net pension UAL as a percentage of payroll	214%	178%
Calculated Side Account Rate Relief	(7.89%)	(8.49%)
Allocated Pooled RHIA UAL	($121,796)	($91,913)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$5,661,047**	**$5,661,047**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(707,412)	(707,412)
5. Side account earnings during 2018		32,349	32,349
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$4,985,485**	**$4,985,485**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$4,985,485	$5,661,047
Side Account 2	0	0
Side Account 3	0	0
Total	**$4,985,485**	**$5,661,047**

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, 2018	December 31, 2017
1. Total side account	$4,985,485	$5,661,047
2. Combined valuation payroll	8,309,320	8,021,582
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(7.89%)	(8.49%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

St Helens School District #502/4279
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
St Helens School District #502/4279

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

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

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

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

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

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

Sincerely,

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

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

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

St Helens School District #502 -- #4279

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for St Helens School District #502 to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to St Helens School District #502.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for St Helens School District #502

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(22.04%)	(22.04%)	(22.04%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**7.95%**	**4.77%**	**9.14%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**8.00%**	**4.77%**	**9.14%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

St Helens School District #502

	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$40,841,842	$36,447,451
Allocated pooled OPSRP UAL	2,886,994	2,347,936
Side account	26,799,446	29,745,104
Net unfunded pension actuarial accrued liability	16,929,390	9,050,283
Combined valuation payroll	15,988,765	15,581,115
Net pension UAL as a percentage of payroll	106%	58%
Calculated Side Account Rate Relief	(22.04%)	(22.96%)
Allocated Pooled RHIA UAL	($234,360)	($178,531)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$29,745,104**	**$29,745,104**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(3,121,017)	(3,121,017)
5. Side account earnings during 2018		176,359	176,359
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$26,799,446**	**$26,799,446**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$11,020,462	$12,244,361
Side Account 2	15,778,984	17,500,744
Side Account 3	0	0
Total	**$26,799,446**	**$29,745,104**

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, 2018	December 31, 2017
1. Total side account	$26,799,446	$29,745,104
2. Combined valuation payroll	15,988,765	15,581,115
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(22.04%)	(22.96%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	\$8.0 million, added to OPSRP normal cost. \$32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Medford School District #549C/4288
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Medford School District #549C -- #4288

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Medford School District #549C to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Medford School District #549C

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(4.71%)	(4.71%)	(4.71%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**25.28%**	**22.10%**	**26.47%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**25.33%**	**22.10%**	**26.47%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$161,424,930	$141,618,508
Allocated pooled OPSRP UAL	11,410,670	9,123,029
Side account	22,618,480	25,507,683
Net unfunded pension actuarial accrued liability	150,217,120	125,233,854
Combined valuation payroll	63,194,633	60,541,249
Net pension UAL as a percentage of payroll	238%	207%
Calculated Side Account Rate Relief	(4.71%)	(5.07%)
Allocated Pooled RHIA UAL	($926,293)	($693,693)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$25,507,683**	**$25,507,683**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(3,043,078)	(3,043,078)
5. Side account earnings during 2018		154,375	154,375
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$22,618,480**	**$22,618,480**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$22,618,480	$25,507,683
Side Account 2	0	0
Side Account 3	0	0
Total	**$22,618,480**	**$25,507,683**

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, 2018	December 31, 2017
1. Total side account	$22,618,480	$25,507,683
2. Combined valuation payroll	63,194,633	60,541,249
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(4.71%)	(5.07%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Dayton Public Schools/4291
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
Dayton Public Schools/4291

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Dayton Public Schools -- #4291

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Dayton Public Schools to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Dayton Public Schools.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Dayton Public Schools

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(17.95%)	(17.95%)	(17.95%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**12.04%**	**8.86%**	**13.23%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**12.09%**	**8.86%**	**13.23%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Dayton Public Schools

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$13,619,207	$12,096,771
Allocated pooled OPSRP UAL	962,703	779,271
Side account	7,276,820	8,209,660
Net unfunded pension actuarial accrued liability	7,305,090	4,666,382
Combined valuation payroll	5,331,647	5,171,313
Net pension UAL as a percentage of payroll	137%	90%
Calculated Side Account Rate Relief	(17.95%)	(19.10%)
Allocated Pooled RHIA UAL	($78,150)	($59,254)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$8,209,660**	**$8,209,660**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(979,423)	(979,423)
5. Side account earnings during 2018		47,583	47,583
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$7,276,820**	**$7,276,820**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$3,092,464	$3,488,379
Side Account 2	4,184,356	4,721,281
Side Account 3	0	0
Total	**$7,276,820**	**$8,209,660**

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, 2018	December 31, 2017
1. Total side account	$7,276,820	$8,209,660
2. Combined valuation payroll	5,331,647	5,171,313
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(17.95%)	(19.10%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Amity School District/4306
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
Amity School District/4306

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Amity School District -- #4306

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Amity School District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Amity School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Amity School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(21.88%)	(21.88%)	(21.88%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**8.11%**	**4.93%**	**9.30%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**8.16%**	**4.93%**	**9.30%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Amity School District

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$11,132,635	$9,563,383
Allocated pooled OPSRP UAL	786,934	616,071
Side account	7,254,528	8,068,611
Net unfunded pension actuarial accrued liability	4,665,041	2,110,843
Combined valuation payroll	4,358,204	4,088,301
Net pension UAL as a percentage of payroll	107%	52%
Calculated Side Account Rate Relief	(21.88%)	(23.74%)
Allocated Pooled RHIA UAL	($63,882)	($46,845)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$8,068,611**	**$8,068,611**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(858,479)	(858,479)
5. Side account earnings during 2018		44,896	44,896
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$7,254,528**	**$7,254,528**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$7,254,528	$8,068,611
Side Account 2	0	0
Side Account 3	0	0
Total	**$7,254,528**	**$8,068,611**

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, 2018	December 31, 2017
1. Total side account	$7,254,528	$8,068,611
2. Combined valuation payroll	4,358,204	4,088,301
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(21.88%)	(23.74%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	\$8.0 million, added to OPSRP normal cost. \$32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Redmond School District #2J/4311
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
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,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Redmond School District #2J -- #4311

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Redmond School District #2J to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Redmond School District #2J

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(7.75%)	(7.75%)	(7.75%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**22.24%**	**19.06%**	**23.43%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**22.29%**	**19.06%**	**23.43%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$98,869,241	$83,452,487
Allocated pooled OPSRP UAL	6,988,786	5,375,988
Side account	22,825,747	25,961,152
Net unfunded pension actuarial accrued liability	83,032,280	62,867,323
Combined valuation payroll	38,705,331	35,675,548
Net pension UAL as a percentage of payroll	215%	176%
Calculated Side Account Rate Relief	(7.75%)	(8.75%)
Allocated Pooled RHIA UAL	($567,334)	($408,777)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$25,961,152**	**$25,961,152**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(3,288,131)	(3,288,131)
5. Side account earnings during 2018		153,226	153,226
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$22,825,747**	**$22,825,747**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$22,825,747	$25,961,152
Side Account 2	0	0
Side Account 3	0	0
Total	**$22,825,747**	**$25,961,152**

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, 2018	December 31, 2017
1. Total side account	$22,825,747	$25,961,152
2. Combined valuation payroll	38,705,331	35,675,548
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(7.75%)	(8.75%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Reedsport School District/4312
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Reedsport School District -- #4312

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Reedsport School District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Reedsport School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(11.20%)	(11.20%)	(11.20%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**18.79%**	**15.61%**	**19.98%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**18.84%**	**15.61%**	**19.98%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$8,910,895	$6,977,129
Allocated pooled OPSRP UAL	629,886	449,465
Side account	2,971,034	3,456,727
Net unfunded pension actuarial accrued liability	6,569,747	3,969,867
Combined valuation payroll	3,488,437	2,982,690
Net pension UAL as a percentage of payroll	188%	133%
Calculated Side Account Rate Relief	(11.20%)	(13.94%)
Allocated Pooled RHIA UAL	($51,133)	($34,176)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$3,456,727**	**$3,456,727**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(505,595)	(505,595)
5. Side account earnings during 2018		20,402	20,402
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$2,971,034**	**$2,971,034**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$2,971,034	$3,456,727
Side Account 2	0	0
Side Account 3	0	0
Total	**$2,971,034**	**$3,456,727**

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, 2018	December 31, 2017
1. Total side account	$2,971,034	$3,456,727
2. Combined valuation payroll	3,488,437	2,982,690
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(11.20%)	(13.94%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	\$8.0 million, added to OPSRP normal cost. \$32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Forest Grove School District/4313
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
Forest Grove School District/4313

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

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

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

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

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

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

Sincerely,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Forest Grove School District -- #4313

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Forest Grove School District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Forest Grove School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Forest Grove School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(7.10%)	(7.10%)	(7.10%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**22.89%**	**19.71%**	**24.08%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**22.94%**	**19.71%**	**24.08%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Forest Grove School District

	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$94,004,164	$82,198,757
Allocated pooled OPSRP UAL	6,644,887	5,295,223
Side account	19,886,817	22,871,151
Net unfunded pension actuarial accrued liability	80,762,234	64,622,829
Combined valuation payroll	36,800,751	35,139,584
Net pension UAL as a percentage of payroll	219%	184%
Calculated Side Account Rate Relief	(7.10%)	(7.83%)
Allocated Pooled RHIA UAL	($539,417)	($402,636)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$22,871,151**	**$22,871,151**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(3,128,405)	(3,128,405)
5. Side account earnings during 2018		144,572	144,572
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$19,886,817**	**$19,886,817**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$19,886,817	$22,871,151
Side Account 2	0	0
Side Account 3	0	0
Total	**$19,886,817**	**$22,871,151**

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, 2018	December 31, 2017
1. Total side account	$19,886,817	$22,871,151
2. Combined valuation payroll	36,800,751	35,139,584
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(7.10%)	(7.83%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	\$8.0 million, added to OPSRP normal cost. \$32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Willamina School District #30J/4314
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
Willamina School District #30J/4314

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

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

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

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

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

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

Sincerely,

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Willamina School District #30J -- #4314

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Willamina School District #30J to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Willamina School District #30J.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Willamina School District #30J

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(3.98%)	(3.98%)	(3.98%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**26.01%**	**22.83%**	**27.20%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**26.06%**	**22.83%**	**27.20%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Willamina School District #30J

	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$13,172,018	$10,459,214
Allocated pooled OPSRP UAL	931,093	673,780
Side account	1,560,350	1,739,790
Net unfunded pension actuarial accrued liability	12,542,761	9,393,204
Combined valuation payroll	5,156,582	4,471,265
Net pension UAL as a percentage of payroll	243%	210%
Calculated Side Account Rate Relief	(3.98%)	(4.68%)
Allocated Pooled RHIA UAL	($75,584)	($51,233)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$1,739,790**	**$1,739,790**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(188,858)	(188,858)
5. Side account earnings during 2018		9,919	9,919
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$1,560,350**	**$1,560,350**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$1,560,350	$1,739,790
Side Account 2	0	0
Side Account 3	0	0
Total	**$1,560,350**	**$1,739,790**

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, 2018	December 31, 2017
1. Total side account	$1,560,350	$1,739,790
2. Combined valuation payroll	5,156,582	4,471,265
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(3.98%)	(4.68%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

John Day School District/4315
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

December 2019
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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

John Day School District -- #4315

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for John Day School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(15.95%)	(15.95%)	(15.95%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**14.04%**	**10.86%**	**15.23%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**14.09%**	**10.86%**	**15.23%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$8,347,138	$7,110,209
Allocated pooled OPSRP UAL	590,035	458,038
Side account	3,964,645	4,367,966
Net unfunded pension actuarial accrued liability	4,972,528	3,200,281
Combined valuation payroll	3,267,738	3,039,581
Net pension UAL as a percentage of payroll	152%	105%
Calculated Side Account Rate Relief	(15.95%)	(17.29%)
Allocated Pooled RHIA UAL	($47,898)	($34,828)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$4,367,966**	**$4,367,966**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(426,833)	(426,833)
5. Side account earnings during 2018		24,012	24,012
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$3,964,645**	**$3,964,645**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$3,964,645	$4,367,966
Side Account 2	0	0
Side Account 3	0	0
Total	**$3,964,645**	**$4,367,966**

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, 2018	December 31, 2017
1. Total side account	$3,964,645	$4,367,966
2. Combined valuation payroll	3,267,738	3,039,581
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(15.95%)	(17.29%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Tigard-Tualatin School District #23J/4316
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
Tigard-Tualatin School District #23J/4316

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Tigard-Tualatin School District #23J -- #4316

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Tigard-Tualatin School District #23J to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Tigard-Tualatin School District #23J.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Tigard-Tualatin School District #23J

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(4.03%)	(4.03%)	(4.03%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**25.96%**	**22.78%**	**27.15%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**26.01%**	**22.78%**	**27.15%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Tigard-Tualatin School District #23J

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$184,254,311	$158,071,048
Allocated pooled OPSRP UAL	13,024,414	10,182,897
Side account	22,091,937	24,918,863
Net unfunded pension actuarial accrued liability	175,186,788	143,335,082
Combined valuation payroll	72,131,879	67,574,633
Net pension UAL as a percentage of payroll	243%	212%
Calculated Side Account Rate Relief	(4.03%)	(4.44%)
Allocated Pooled RHIA UAL	($1,057,293)	($774,283)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$24,918,863**	**$24,918,863**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(2,975,142)	(2,975,142)
5. Side account earnings during 2018		148,717	148,717
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$22,091,937**	**$22,091,937**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$22,091,937	$24,918,863
Side Account 2	0	0
Side Account 3	0	0
Total	**$22,091,937**	**$24,918,863**

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, 2018	December 31, 2017
1. Total side account	$22,091,937	$24,918,863
2. Combined valuation payroll	72,131,879	67,574,633
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(4.03%)	(4.44%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Sherwood School District #88J/4317
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

Milliman

December 2019
Sherwood School District #88J/4317

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
Sherwood School District #88J/4317

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Sherwood School District #88J -- #4317

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Sherwood School District #88J to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Sherwood School District #88J.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Sherwood School District #88J

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(4.40%)	(4.40%)	(4.40%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**25.59%**	**22.41%**	**26.78%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**25.64%**	**22.41%**	**26.78%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Sherwood School District #88J

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$71,519,307	$61,715,015
Allocated pooled OPSRP UAL	5,055,497	3,975,666
Side account	9,349,529	10,596,606
Net unfunded pension actuarial accrued liability	67,225,275	55,094,075
Combined valuation payroll	27,998,379	26,382,880
Net pension UAL as a percentage of payroll	240%	209%
Calculated Side Account Rate Relief	(4.40%)	(4.83%)
Allocated Pooled RHIA UAL	($410,394)	($302,300)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$10,596,606**	**$10,596,606**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(1,308,051)	(1,308,051)
5. Side account earnings during 2018		61,974	61,974
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$9,349,529**	**$9,349,529**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$6,186,477	$7,012,201
Side Account 2	3,163,052	3,584,405
Side Account 3	0	0
Total	**$9,349,529**	**$10,596,606**

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, 2018	December 31, 2017
1. Total side account	$9,349,529	$10,596,606
2. Combined valuation payroll	27,998,379	26,382,880
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(4.40%)	(4.83%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Rainier School District #13/4320
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Rainier School District #13 -- #4320

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Rainier School District #13 to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Rainier School District #13

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(13.31%)	(13.31%)	(13.31%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**16.68%**	**13.50%**	**17.87%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**16.73%**	**13.50%**	**17.87%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$13,342,562	$10,133,215
Allocated pooled OPSRP UAL	943,148	652,779
Side account	5,288,523	5,953,534
Net unfunded pension actuarial accrued liability	8,997,187	4,832,460
Combined valuation payroll	5,223,346	4,331,902
Net pension UAL as a percentage of payroll	172%	112%
Calculated Side Account Rate Relief	(13.31%)	(16.53%)
Allocated Pooled RHIA UAL	($76,563)	($49,636)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$5,953,534**	**$5,953,534**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(699,381)	(699,381)
5. Side account earnings during 2018		34,870	34,870
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$5,288,523**	**$5,288,523**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$5,288,523	$5,953,534
Side Account 2	0	0
Side Account 3	0	0
Total	**$5,288,523**	**$5,953,534**

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, 2018	December 31, 2017
1. Total side account	$5,288,523	$5,953,534
2. Combined valuation payroll	5,223,346	4,331,902
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(13.31%)	(16.53%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

North Clackamas School District #12/4321
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

North Clackamas School District #12 -- #4321

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for North Clackamas School District #12

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(14.12%)	(14.12%)	(14.12%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**15.87%**	**12.69%**	**17.06%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**15.92%**	**12.69%**	**17.06%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$251,009,209	$221,784,895
Allocated pooled OPSRP UAL	17,743,128	14,287,327
Side account	105,518,521	120,416,390
Net unfunded pension actuarial accrued liability	163,233,816	115,655,832
Combined valuation payroll	98,265,088	94,812,004
Net pension UAL as a percentage of payroll	166%	122%
Calculated Side Account Rate Relief	(14.12%)	(15.28%)
Allocated Pooled RHIA UAL	($1,440,348)	($1,086,374)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$120,416,390**	**$120,416,390**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(15,614,026)	(15,614,026)
5. Side account earnings during 2018		717,157	717,157
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$105,518,521**	**$105,518,521**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$47,279,243	$53,951,887
Side Account 2	58,239,278	66,464,503
Side Account 3	0	0
Total	**$105,518,521**	**$120,416,390**

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, 2018	December 31, 2017
1. Total side account	$105,518,521	$120,416,390
2. Combined valuation payroll	98,265,088	94,812,004
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	(14.12%)	(15.28%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	\$8.0 million, added to OPSRP normal cost. \$32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Estacada School District #108/4323
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
Estacada School District #108/4323

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

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

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

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

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

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

Sincerely,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Estacada School District #108 -- #4323

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Estacada School District #108 to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Estacada School District #108.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Estacada School District #108

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(12.89%)	(12.89%)	(12.89%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**17.10%**	**13.92%**	**18.29%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**17.15%**	**13.92%**	**18.29%**

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

[1] *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

[2] *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

[3] *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Estacada School District #108

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$25,721,011	$22,974,521
Allocated pooled OPSRP UAL	1,818,145	1,480,013
Side account	9,873,153	11,061,765
Net unfunded pension actuarial accrued liability	17,666,003	13,392,769
Combined valuation payroll	10,069,262	9,821,500
Net pension UAL as a percentage of payroll	175%	136%
Calculated Side Account Rate Relief	(12.89%)	(13.55%)
Allocated Pooled RHIA UAL	($147,593)	($112,537)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$11,061,765**	**$11,061,765**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(1,253,655)	(1,253,655)
5. Side account earnings during 2018		65,543	65,543
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$9,873,153**	**$9,873,153**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$9,873,153	$11,061,765
Side Account 2	0	0
Side Account 3	0	0
Total	**$9,873,153**	**$11,061,765**

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, 2018	December 31, 2017
1. Total side account	$9,873,153	$11,061,765
2. Combined valuation payroll	10,069,262	9,821,500
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(12.89%)	(13.55%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Harney County School District #3/4326
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Harney County School District #3 -- #4326

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Harney County School District #3

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(53.15%)	(53.15%)	(53.15%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**0.00%**	**0.00%**	**0.00%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**0.05%**	**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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$10,493,727	$9,377,330
Allocated pooled OPSRP UAL	741,772	604,085
Side account	16,608,606	17,458,422
Net unfunded pension actuarial accrued liability	(5,373,107)	(7,477,007)
Combined valuation payroll	4,108,084	4,008,765
Net pension UAL as a percentage of payroll	(131%)	(187%)
Calculated Side Account Rate Relief	(53.15%)	(52.40%)
Allocated Pooled RHIA UAL	($60,215)	($45,933)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$17,458,422**	**$17,458,422**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(936,314)	(936,314)
5. Side account earnings during 2018		87,498	87,498
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$16,608,606**	**$16,608,606**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$6,937,064	$7,462,408
Side Account 2	9,671,542	9,996,014
Side Account 3	0	0
Total	**$16,608,606**	**$17,458,422**

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, 2018	December 31, 2017
1. Total side account	$16,608,606	$17,458,422
2. Combined valuation payroll	4,108,084	4,008,765
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(53.15%)	(52.40%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

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

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

Milliman

December 2019
Gervais School District #1/4329

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Gervais School District #1 -- #4329

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Gervais School District #1

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(22.97%)	(22.97%)	(22.97%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**7.02%**	**3.84%**	**8.21%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**7.07%**	**3.84%**	**8.21%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$14,853,517	$13,089,316
Allocated pooled OPSRP UAL	1,049,953	843,210
Side account	10,158,096	11,235,179
Net unfunded pension actuarial accrued liability	5,745,374	2,697,347
Combined valuation payroll	5,814,855	5,595,621
Net pension UAL as a percentage of payroll	99%	48%
Calculated Side Account Rate Relief	(22.97%)	(24.16%)
Allocated Pooled RHIA UAL	($85,233)	($64,116)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$11,235,179**	**$11,235,179**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(1,139,259)	(1,139,259)
5. Side account earnings during 2018		62,676	62,676
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$10,158,096**	**$10,158,096**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$10,158,096	$11,235,179
Side Account 2	0	0
Side Account 3	0	0
Total	**$10,158,096**	**$11,235,179**

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, 2018	December 31, 2017
1. Total side account	$10,158,096	$11,235,179
2. Combined valuation payroll	5,814,855	5,595,621
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(22.97%)	(24.16%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Molalla River School District/4331
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

December 2019
Molalla River School District/4331

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Molalla River School District -- #4331

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Molalla River School District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Molalla River School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(27.31%)	(27.31%)	(27.31%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**2.68%**	**0.00%**	**3.87%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**2.73%**	**0.00%**	**3.87%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$33,113,039	$29,229,727
Allocated pooled OPSRP UAL	2,340,667	1,882,972
Side account	26,918,067	29,938,673
Net unfunded pension actuarial accrued liability	8,535,639	1,174,026
Combined valuation payroll	12,963,093	12,495,572
Net pension UAL as a percentage of payroll	66%	9%
Calculated Side Account Rate Relief	(27.31%)	(28.82%)
Allocated Pooled RHIA UAL	($190,010)	($143,177)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$29,938,673**	**$29,938,673**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(3,196,403)	(3,196,403)
5. Side account earnings during 2018		176,797	176,797
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$26,918,067**	**$26,918,067**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$10,732,506	$12,094,151
Side Account 2	16,185,561	17,844,521
Side Account 3	0	0
Total	**$26,918,067**	**$29,938,673**

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, 2018	December 31, 2017
1. Total side account	$26,918,067	$29,938,673
2. Combined valuation payroll	12,963,093	12,495,572
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(27.31%)	(28.82%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Gresham-Barlow School District #10/4332
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

Milliman

December 2019
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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Gresham-Barlow School District #10 -- #4332

December 2019

CONTENTS

Executive Summary ... **1**

Employer Contribution Rates ... 1

Accounting Information ... 3

Principal Valuation Results ... 4

- Employer ... 4
- School District Pool ... 5
- OPSRP ... 6
- Retiree Healthcare ... 6

Side Account Information ... **7**

Brief Summary of Actuarial Methods and Assumptions ... **9**

Brief Summary of Changes in Plan Provisions ... **11**

Glossary ... **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Gresham-Barlow School District #10

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(13.02%)	(13.02%)	(13.02%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**16.97%**	**13.79%**	**18.16%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**17.02%**	**13.79%**	**18.16%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$152,873,013	$135,635,968
Allocated pooled OPSRP UAL	10,806,159	8,737,635
Side account	59,292,986	68,132,913
Net unfunded pension actuarial accrued liability	104,386,186	76,240,690
Combined valuation payroll	59,846,729	57,983,741
Net pension UAL as a percentage of payroll	174%	131%
Calculated Side Account Rate Relief	(13.02%)	(14.14%)
Allocated Pooled RHIA UAL	($877,220)	($664,389)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$68,132,913**	**$68,132,913**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(9,275,818)	(9,275,818)
5. Side account earnings during 2018		436,891	436,891
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$59,292,986**	**$59,292,986**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$35,016,626	$40,239,589
Side Account 2	24,276,360	27,893,323
Side Account 3	0	0
Total	**$59,292,986**	**$68,132,913**

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, 2018	December 31, 2017
1. Total side account	$59,292,986	$68,132,913
2. Combined valuation payroll	59,846,729	57,983,741
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(13.02%)	(14.14%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Canby School District/4333
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

December 2019
Canby School District/4333

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
Canby School District/4333

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Canby School District -- #4333

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Canby School District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Canby School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Canby School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(18.39%)	(18.39%)	(18.39%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**11.60%**	**8.42%**	**12.79%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**11.65%**	**8.42%**	**12.79%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Canby School District

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$68,919,555	$58,764,182
Allocated pooled OPSRP UAL	4,871,728	3,785,574
Side account	37,749,402	42,946,743
Net unfunded pension actuarial accrued liability	36,041,881	19,603,013
Combined valuation payroll	26,980,628	25,121,413
Net pension UAL as a percentage of payroll	134%	78%
Calculated Side Account Rate Relief	(18.39%)	(20.57%)
Allocated Pooled RHIA UAL	($395,476)	($287,846)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$42,946,743**	**$42,946,743**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(5,446,918)	(5,446,918)
5. Side account earnings during 2018		250,577	250,577
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$37,749,402**	**$37,749,402**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$16,627,193	$18,914,563
Side Account 2	21,122,208	24,032,180
Side Account 3	0	0
Total	**$37,749,402**	**$42,946,743**

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, 2018	December 31, 2017
1. Total side account	$37,749,402	$42,946,743
2. Combined valuation payroll	26,980,628	25,121,413
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(18.39%)	(20.57%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Cascade School District #5/4334
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

Milliman

December 2019
Cascade School District #5/4334

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
Cascade School District #5/4334

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Cascade School District #5 -- #4334

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Cascade School District #5 to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Cascade School District #5.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Cascade School District #5

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(15.55%)	(15.55%)	(15.55%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**14.44%**	**11.26%**	**15.63%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**14.49%**	**11.26%**	**15.63%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Cascade School District #5

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$30,741,015	$26,166,703
Allocated pooled OPSRP UAL	2,172,995	1,685,652
Side account	14,230,619	16,454,331
Net unfunded pension actuarial accrued liability	18,683,391	11,398,024
Combined valuation payroll	12,034,493	11,186,143
Net pension UAL as a percentage of payroll	155%	102%
Calculated Side Account Rate Relief	(15.55%)	(17.70%)
Allocated Pooled RHIA UAL	($176,399)	($128,173)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$16,454,331**	**$16,454,331**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(2,317,940)	(2,317,940)
5. Side account earnings during 2018		94,728	94,728
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$14,230,619**	**$14,230,619**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$14,230,619	$16,454,331
Side Account 2	0	0
Side Account 3	0	0
Total	**$14,230,619**	**$16,454,331**

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, 2018	December 31, 2017
1. Total side account	$14,230,619	$16,454,331
2. Combined valuation payroll	12,034,493	11,186,143
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(15.55%)	(17.70%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Milton-Freewater Unified School District #7/4335
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

Milliman

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Milton-Freewater Unified School District #7 -- #4335

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Milton-Freewater Unified School District #7 to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Milton-Freewater Unified School District #7

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(19.66%)	(19.66%)	(19.66%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**10.33%**	**7.15%**	**11.52%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**10.38%**	**7.15%**	**11.52%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$23,562,058	$19,638,662
Allocated pooled OPSRP UAL	1,665,535	1,265,118
Side account	13,792,438	15,512,954
Net unfunded pension actuarial accrued liability	11,435,155	5,390,826
Combined valuation payroll	9,224,075	8,395,436
Net pension UAL as a percentage of payroll	124%	64%
Calculated Side Account Rate Relief	(19.66%)	(22.23%)
Allocated Pooled RHIA UAL	($135,204)	($96,197)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$15,512,954**	**$15,512,954**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(1,804,331)	(1,804,331)
5. Side account earnings during 2018		84,815	84,815
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$13,792,438**	**$13,792,438**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$6,378,397	$7,170,574
Side Account 2	7,414,041	8,342,380
Side Account 3	0	0
Total	**$13,792,438**	**$15,512,954**

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, 2018	December 31, 2017
1. Total side account	$13,792,438	$15,512,954
2. Combined valuation payroll	9,224,075	8,395,436
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(19.66%)	(22.23%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	\$8.0 million, added to OPSRP normal cost. \$32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Nestucca Valley School District #101/4336
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

Milliman

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

Milliman

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Nestucca Valley School District #101 -- #4336

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Nestucca Valley School District #101 to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Nestucca Valley School District #101

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(8.98%)	(8.98%)	(8.98%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**21.01%**	**17.83%**	**22.20%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**21.06%**	**17.83%**	**22.20%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$7,505,904	$6,792,963
Allocated pooled OPSRP UAL	530,571	437,601
Side account	2,005,943	2,238,175
Net unfunded pension actuarial accrued liability	6,030,532	4,992,389
Combined valuation payroll	2,938,412	2,903,960
Net pension UAL as a percentage of payroll	205%	172%
Calculated Side Account Rate Relief	(8.98%)	(9.27%)
Allocated Pooled RHIA UAL	($43,071)	($33,274)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$2,238,175**	**$2,238,175**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(244,676)	(244,676)
5. Side account earnings during 2018		12,944	12,944
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$2,005,943**	**$2,005,943**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$2,005,943	$2,238,175
Side Account 2	0	0
Side Account 3	0	0
Total	**$2,005,943**	**$2,238,175**

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, 2018	December 31, 2017
1. Total side account	$2,005,943	$2,238,175
2. Combined valuation payroll	2,938,412	2,903,960
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(8.98%)	(9.27%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Three Rivers U J School District/4338
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
Three Rivers U J School District/4338

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

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

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

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

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

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

Sincerely,

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

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

Milliman

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Three Rivers U J School District -- #4338

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for Three Rivers U J School District to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 system-wide actuarial valuation report. This report develops employer-specific side account rates and applies the results from the system-wide valuation to Three Rivers U J School District.

Employer Contribution Rates

The following table summarizes the employer contribution rates calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Three Rivers U J School District

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(10.20%)	(10.20%)	(10.20%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**19.79%**	**16.61%**	**20.98%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**19.84%**	**16.61%**	**20.98%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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.

Three Rivers U J School District

	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$66,727,829	$56,981,183
Allocated pooled OPSRP UAL	4,716,801	3,670,713
Side account	20,269,706	22,735,454
Net unfunded pension actuarial accrued liability	51,174,924	37,916,442
Combined valuation payroll	26,122,611	24,359,189
Net pension UAL as a percentage of payroll	196%	156%
Calculated Side Account Rate Relief	(10.20%)	(11.23%)
Allocated Pooled RHIA UAL	($382,900)	($279,112)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$22,735,454**	**$22,735,454**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(2,599,574)	(2,599,574)
5. Side account earnings during 2018		134,327	134,327
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$20,269,706**	**$20,269,706**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$20,269,706	$22,735,454
Side Account 2	0	0
Side Account 3	0	0
Total	**$20,269,706**	**$22,735,454**

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, 2018	December 31, 2017
1. Total side account	$20,269,706	$22,735,454
2. Combined valuation payroll	26,122,611	24,359,189
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(10.20%)	(11.23%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Monroe School District #1J/4340
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

December 2019
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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Monroe School District #1J -- #4340

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Monroe School District #1J

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(9.67%)	(9.67%)	(9.67%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**20.32%**	**17.14%**	**21.51%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**20.37%**	**17.14%**	**21.51%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$5,904,955	$5,234,682
Allocated pooled OPSRP UAL	417,405	337,217
Side account	1,699,418	1,874,804
Net unfunded pension actuarial accrued liability	4,622,942	3,697,095
Combined valuation payroll	2,311,672	2,237,802
Net pension UAL as a percentage of payroll	200%	165%
Calculated Side Account Rate Relief	(9.67%)	(10.08%)
Allocated Pooled RHIA UAL	($33,884)	($25,641)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	December 31, 2018	December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$1,874,804**	**$1,874,804**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(185,423)	(185,423)
5. Side account earnings during 2018		10,537	10,537
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$1,699,418**	**$1,699,418**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$1,699,418	$1,874,804
Side Account 2	0	0
Side Account 3	0	0
Total	**$1,699,418**	**$1,874,804**

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, 2018	December 31, 2017
1. Total side account	$1,699,418	$1,874,804
2. Combined valuation payroll	2,311,672	2,237,802
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	(9.67%)	(10.08%)

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

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

Hillsboro School District #1J/4341
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

Milliman

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

Hillsboro School District #1J -- #4341

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

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

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for Hillsboro School District #1J

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(9.42%)	(9.42%)	(9.42%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**20.57%**	**17.39%**	**21.76%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**20.62%**	**17.39%**	**21.76%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$326,480,313	$287,619,148
Allocated pooled OPSRP UAL	23,077,966	18,528,353
Side account	103,275,437	116,948,871
Net unfunded pension actuarial accrued liability	246,282,842	189,198,630
Combined valuation payroll	127,810,517	122,955,840
Net pension UAL as a percentage of payroll	193%	154%
Calculated Side Account Rate Relief	(9.42%)	(10.30%)
Allocated Pooled RHIA UAL	($1,873,419)	($1,408,852)

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 the combined valuation payroll 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, 2018	December 31, 2017
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

RHIA *($ in millions)*	Actuarial Valuation as of December 31, 2018	Actuarial Valuation as of December 31, 2017
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$116,948,871**	**$116,948,871**
2. Deposits during 2018			
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2018		(14,396,130)	(14,396,130)
5. Side account earnings during 2018		723,697	723,697
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$103,275,437**	**$103,275,437**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$68,839,921	$79,178,921
Side Account 2	34,435,517	37,769,950
Side Account 3	0	0
Total	**$103,275,437**	**$116,948,871**

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, 2018	December 31, 2017
1. Total side account	$103,275,437	$116,948,871
2. Combined valuation payroll	127,810,517	122,955,840
3. Average amortization factor	8.573	9.240
4. Total side account rate (-1. ÷ 2. ÷ 3.) [1]	(9.42%)	(10.30%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	\$8.0 million, added to OPSRP normal cost. \$32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

North Santiam School District #29J/4342
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

December 2019
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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

North Santiam School District #29J -- #4342

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for North Santiam School District #29J to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for North Santiam School District #29J

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(17.28%)	(17.28%)	(17.28%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**12.71%**	**9.53%**	**13.90%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**12.76%**	**9.53%**	**13.90%**

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 and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

[2] *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

[3] *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	December 31, 2017
Allocated pooled T1/T2 UAL	$29,429,718	$25,875,679
Allocated pooled OPSRP UAL	2,080,303	1,666,905
Side account	15,145,728	16,973,764
Net unfunded pension actuarial accrued liability	16,364,293	10,568,820
Combined valuation payroll	11,521,147	11,061,732
Net pension UAL as a percentage of payroll	142%	96%
Calculated Side Account Rate Relief	(17.28%)	(18.46%)
Allocated Pooled RHIA UAL	($168,874)	($126,747)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$16,973,764**	**$16,973,764**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(1,931,696)	(1,931,696)
5. Side account earnings during 2018		104,161	104,161
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$15,145,728**	**$15,145,728**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$15,145,728	$16,973,764
Side Account 2	0	0
Side Account 3	0	0
Total	**$15,145,728**	**$16,973,764**

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, 2018	December 31, 2017
1. Total side account	$15,145,728	$16,973,764
2. Combined valuation payroll	11,521,147	11,061,732
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	(17.28%)	(18.46%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool’s current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634

December 2019

North Wasco County School District #21/4381
Oregon Public Employees Retirement System

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, 2018. 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 valuation is advisory and does not affect employer contribution rates. Employer contribution rates effective July 1, 2021 through June 30, 2023 will be calculated in the December 31, 2019 actuarial valuation.

This report reflects the benefit provisions in effect as of December 31, 2018, as modified by Senate Bill 1049 which was enacted in June 2019. The report also reflects the Tier 1/Tier 2 reamortization provisions of Senate Bill 1049. 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 actuarialservices@pers.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.

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 October 2019.

The actuarial computations presented in this report are for purposes of estimating the contribution rates effective from July 2021 to June 2023 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 appendices 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.

Milliman

December 2019
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,

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

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

ACTUARIAL VALUATION REPORT
DECEMBER 31, 2018

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

SCHOOL DISTRICT POOL

North Wasco County School District #21 -- #4381

December 2019

CONTENTS

Executive Summary **1**

Employer Contribution Rates 1

Accounting Information 3

Principal Valuation Results 4

- Employer 4
- School District Pool 5
- OPSRP 6
- Retiree Healthcare 6

Side Account Information **7**

Brief Summary of Actuarial Methods and Assumptions **9**

Brief Summary of Changes in Plan Provisions **11**

Glossary **12**

Executive Summary

Milliman has prepared this report for North Wasco County School District #21 to:

- Provide summary December 31, 2018 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 advisory information calculated as of December 31, 2018 on estimated employer-specific contribution rates effective July 1, 2021 through June 30, 2023, and
- Provide employer-specific information on side accounts as of December 31, 2018.

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, 2018 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 calculated as of December 31, 2018 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Advisory 2021 - 2023 Employer Rates Calculated as of December 31, 2018 for North Wasco County School District #21

	Payroll		
		OPSRP	
	Tier 1/Tier 2	General Service	Police & Fire
Pension			
Normal cost rate	13.63%	8.70%	13.07%
Tier 1/Tier 2 UAL rate [1]	17.05%	17.05%	17.05%
OPSRP UAL rate	1.76%	1.76%	1.76%
Side account rate relief [2]	(12.22%)	(12.22%)	(12.22%)
Member redirect offset [3]	(2.45%)	(0.70%)	(0.70%)
Net employer pension contribution rate	**17.77%**	**14.59%**	**18.96%**
Retiree Healthcare			
Normal cost rate	0.05%	0.00%	0.00%
UAL rate	0.00%	0.00%	0.00%
Net retiree healthcare rate	**0.05%**	**0.00%**	**0.00%**
Total net employer contribution rate	**17.82%**	**14.59%**	**18.96%**

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

1 *Includes Multnomah Fire District #10 rate and any impact of rate collar developed on page 42 of the system-wide actuarial valuation report.*

2 *The side account rate relief shown may be reduced such that the net pension contribution rate does not go below 0.00%.*

3 *Redirected member contributions under Senate Bill 1049 (2.50% of payroll for Tier 1/Tier 2 and 0.75% of payroll for OPSRP) are anticipated to offset employer contribution rates. Redirect does not apply to members with monthly pay below a threshold. The values shown in the table incorporate an estimate of the effect of this limitation.*

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Total 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, 2018 is 70%.

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 (GASB 68), which replaced Statement No. 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 No. 75 (GASB 75), which replaced Statement No. 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, 2018	**December 31, 2017**
Allocated pooled T1/T2 UAL	$39,632,650	$32,987,784
Allocated pooled OPSRP UAL	2,801,519	2,125,065
Side account	14,424,608	16,243,855
Net unfunded pension actuarial accrued liability	28,009,561	18,868,994
Combined valuation payroll	15,515,390	14,102,123
Net pension UAL as a percentage of payroll	181%	134%
Calculated Side Account Rate Relief	(12.22%)	(13.86%)
Allocated Pooled RHIA UAL	($227,421)	($161,585)

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 the combined valuation payroll 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, 2018	**December 31, 2017**
Normal cost	$190.9	$199.0
Tier 1/Tier 2 valuation payroll	1,401.2	1,443.7
Normal cost rate	13.63%	13.79%
Actuarial accrued liability	$29,898.4	$29,677.4
Actuarial asset value	20,846.8	21,924.7
Unfunded actuarial accrued liability	9,051.6	7,752.7
Funded status	70%	74%
Combined valuation payroll	$3,543.5	$3,314.2
UAL as a percentage of payroll	255%	234%
UAL rate (includes Multnomah Fire District #10)	17.05%	16.73%
Tier 1/Tier 2 Active Members		
▪ Count	21,914	23,753
▪ Average Age	53.2	52.8
▪ Average Service	20.4	19.7
▪ Average Valuation Salary (in dollars)	$63,939	$60,781
Tier 1/Tier 2 Dormant Members		
▪ Count	11,521	12,003
▪ Average Age	56.6	56.1
▪ Average Monthly Benefit (in dollars)	$1,018	$1,004
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	68,547	67,545
▪ Average Age	72.8	72.4
▪ Average Monthly Benefit (in dollars)	$2,280	$2,236

Executive Summary

Principal Valuation Results (continued)

OPSRP

($ in millions)	Actuarial Valuation as of	
	December 31, 2018	**December 31, 2017**
General service normal cost	$519.9	$435.7
OPSRP general service valuation payroll	5,973.4	5,187.5
General service normal cost rate	8.70%	8.40%
Police and fire normal cost	$104.9	$86.6
OPSRP police and fire valuation payroll	802.5	664.5
Police and fire normal cost rate	13.07%	13.03%
Actuarial accrued liability	$6,738.0	$5,634.7
Actuarial asset value	4,783.0	4,116.5
Unfunded actuarial accrued liability	1,955.0	1,518.2
Funded status	71%	73%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	18%	15%
UAL rate	1.76%	1.45%

Retiree Healthcare

	Actuarial Valuation as of	
RHIA *($ in millions)*	**December 31, 2018**	**December 31, 2017**
Normal cost	$2.2	$2.5
Tier 1 / Tier 2 valuation payroll	4,076.1	4,246.9
Normal cost rate	0.05%	0.06%
Actuarial accrued liability	$411.7	$437.6
Actuarial asset value	570.7	553.3
Unfunded actuarial accrued liability	(159.1)	(115.7)
Funded status	139%	126%
Combined valuation payroll	$10,852.0	$10,098.9
UAL as a percentage of payroll	(1%)	(1%)
UAL rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

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

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2017	**N/A**	**$16,243,855**	**$16,243,855**
2. Deposits during 2018			
3. Administrative expenses		(500)	(500)
4. Amount transferred to employer reserves during 2018		(1,912,259)	(1,912,259)
5. Side account earnings during 2018		93,512	93,512
6. Side account as of December 31, 2018 ***(1. + 2. + 3. + 4. + 5.)***		**$14,424,608**	**$14,424,608**

Side Account Information

Side Account Balances

	December 31, 2018	December 31, 2017
Side Account 1	$14,424,608	$16,243,855
Side Account 2	0	0
Side Account 3	0	0
Total	**$14,424,608**	**$16,243,855**

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, 2018	December 31, 2017
1. Total side account	$14,424,608	$16,243,855
2. Combined valuation payroll	15,515,390	14,102,123
3. Average amortization factor	7.606	8.312
4. Total side account rate (-1. ÷ 2. ÷ 3.)[1]	(12.22%)	(13.86%)

[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, 2018 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

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

Actuarial cost method	Entry Age Normal.
Amortization method	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period. Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
Asset valuation method	Market value of assets, excluding reserves.
Contribution rate stabilization method (rate collar)	The contribution rate stabilization method, also referred to as the rate collar, is applied separately to each Tier 1/Tier 2 experience sharing pool (State and Local Government Rate Pool, School Districts) and independent employer. The collar's centering point for Tier 1/Tier 2 calculations is the sum of the Tier 1/Tier 2 Normal Cost and Tier 1/Tier 2 UAL Rates currently in effect. In the subsequent biennium, the increase in the sum of those two rate components is limited by the collar to 20% of the current sum of those two rate components, or 3% of payroll, if greater. If the funded status excluding side accounts is less than 70%, the width of the collar widens on a graded scale, reaching 40% of the current sum of the two rate components or 6% of payroll, if greater, if funded status excluding side accounts is 60% or less. A separate but parallel rate collar calculation is performed for the sum of the OPSRP Normal Cost and OPSRP UAL rates based on the funded status of the OPSRP program.

Economic Assumptions

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

Net investment return	7.20% compounded annually on system assets.
Interest crediting	7.20% compounded annually on members' regular account balances. 7.20% compounded annually on members' variable account balances.
Consumer price inflation	2.50% per year.
Future general wage inflation	3.50% per year.
Healthcare cost inflation	Ranging from 7.1% in 2019 to 4.1% in 2094.
Administrative Expenses	$8.0 million, added to OPSRP normal cost. $32.5 million, added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2017 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

Senate Bill 1049 was signed into law in June 2019 and requires a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.

Changes in Economic Assumptions

- **Administrative Expenses**

  Administrative expenses were assumed to be $8.0 million per year for the OPSRP System and $32.5 million per year for the Tier 1/Tier 2 System.

Changes in Demographic Assumptions

- **Mortality**

  The updated mortality assumption uses the Pub-2010 base mortality tables (published in 2019) with group-specific job category adjustments. A projection scale for continued future mortality improvement based on the 60-year average of observed Social Security mortality improvement is applied generationally to the base tables.

- **Disability, Retirement, and Termination**

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

A complete summary of all assumptions used as part of the December 31, 2018 actuarial valuation is contained in the system-wide actuarial valuation report.

Brief Summary of Changes in Plan Provisions

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.

Senate Bill 1049, signed into law in June 2019, made a number of changes to the PERS system, including:

- Effective with calendar year 2020, annual salary included in the calculation of Final Average Salary will be limited to $195,000 (as indexed for inflation in future years).
- The PERS Board was required to implement a one-time re-amortization of Tier 1/Tier 2 UAL over a closed 22 year period at the December 31, 2019 rate-setting actuarial valuation, which will set actuarially determined contribution rates for the 2021-2023 biennium.
- For years 2020 through 2024, the limitation on the hours that can be worked by a rehired retire is eliminated. Effective January 1, 2020, contributions will also be charged on the payroll of rehired retirees.
- Effective July 1, 2020, a portion of the 6% of salary member contribution to the Individual Account Program (IAP) will be redirected to Employee Pension Stability Accounts, which will help fund the defined benefits provided under Tier 1/Tier 2 and OPSRP. For Tier 1/Tier 2 members, the prospectively redirected amount will be 2.5% of salary, and for OPSRP members the amount will be 0.75% of salary. The redirection will only apply to members earning $2,500 per month or more (indexed for inflation).

The projected benefits in this valuation reflect the limit on annual salary starting in 2020, which reduced the actuarial accrued liability. The re-amortization of Tier 1/Tier 2 UAL is incorporated in the calculation of the advisory Tier 1/Tier 2 UAL rate. The changes related to the work after retirement provisions are not explicitly reflected in the determination of liabilities or contribution rates shown in this valuation. Our understanding is that redirected member contributions are expected to help pay the total collared contribution rates adopted for the 2021-2023 biennium and will serve as an offset to employer contributions, and we have illustrated that offset for advisory 2021-2023 rates shown in this 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.

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 contribution rate setting methodology that defines the maximum biennium-to-biennium change in the sum of the normal cost rate and the associated UAL rate for a given experience-sharing pool. The width of the collar is determined by the pool's current normal cost rate, UAL 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 prior to GASB 75.

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.

Milliman
1455 SW Broadway, Suite 1600
Portland, OR 97201-3412
503 227 0634