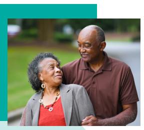
WASHINGTON STATE

2018 ACTUARIAL VALUATION OF LEOFF 1 MEDICAL BENEFITS



Office of the State Actuary

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JULY 2019

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July 2019

As directed by the Legislature, the Office of the State Actuary (OSA) completed an actuarial valuation of the postemployment medical and long-term care benefits provided by local government employers to members of the Law Enforcement Officers' and Fire Fighters' Retirement System Plan 1 (LEOFF 1). We prepared this report using assumptions and methodology consistent with the reporting requirements of the Governmental Accounting Standards Board (GASB) Statement No. 75. Please see the **Background** section for more information.

This report shows the value of the statewide liability, as of June 30, 2018, for the retiree medical benefits provided by LEOFF 1 employers. Statewide liabilities are for informational purposes only. The responsibility to fund this liability belongs to the employers of LEOFF 1 members, not the state of Washington.

The report is organized into the following sections:

- Key Results.
- Background.
- Actuarial Exhibits.
- Participant Data.
- Assumptions.
- Appendices.

The **Key Results** section summarizes the high-level results and provides explanation for the change in liability since the last valuation. The **Background** section discusses the nature of the Other Postemployment Benefits (OPEB) liabilities, history of reporting requirements under GASB, and how the liabilities are calculated. The **Actuarial Exhibits** section discusses the LEOFF 1 OPEB financial reporting requirements for the state and documents detailed valuation results. The detailed results include sensitivity analysis about how the results can change under a different set of assumptions. The **Participant Data** section provides summarized information about the retired members currently receiving medical benefits and the active members who we expect will receive medical benefits in the future. The **Assumptions** section provides a summary of the actuarial assumptions used in this valuation. The **Appendices** provide a summary of the major plan provisions.

LEOFF 1 employers should not use this report to satisfy their individual employer reporting requirements under GASB 75. OSA created an online tool to help eligible employers

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calculate their individual reporting requirements. This online tool, available on our *website*, utilizes the alternative measurement method allowed under GASB 75 and can be used by employers with fewer than one hundred total plan members.

We encourage you to submit any questions you might have concerning this report to our regular e-mail address: *state.actuary@leg.wa.gov*.

Lisa A. Won, ASA, FCA, MAAA	Kyle Stineman, ASA
Deputy State Actuary	Senior Actuarial Analyst

I. Key Results

HOW HAS THE LIABILITY CHANGED?

This section summarizes how the statewide LEOFF 1 OPEB liability changed since the prior valuation. For GASB Statement 75, the Actuarial Accrued Liability (AAL) under the Entry Age Normal (EAN) cost method is referred to as the Total OPEB Liability (TOL).

Key Results		
	Measurement Date	
(Dollars in Thousands)	6/30/2016*	6/30/2018
Total OPEB Liability	$2,679,037	$2,294,526
Benefit Payments/Employer Contributions	$112,950	$116,550

**Measured using a discount rate of 3.75%, our assumption under GASB 45.*

WHY THE LIABILITY CHANGED?

Short-term actuarial gains or losses occur when the actual economic and demographic experience differs from what we expected in the valuation. An actuarial gain would reduce the liability, while a loss would increase the liability. Significant changes in plan provisions, actuarial assumptions, and methods can also impact the liability. In total, the liability decreased by approximately 14 percent. Significant factors that impacted the results of this valuation include the following:

- Updating census data resulted in a 1 percent decrease in liabilities.
- Healthcare assumptions, including trend rates and healthcare costs, were updated for this valuation.
  - The new healthcare trends decreased liabilities by approximately 3 percent due to reduced expectations in medical costs and a lower assumed inflation assumption. While not a change, please note the trends used in valuing the GASB 75 liabilities include the excise tax.
  - The new healthcare costs decreased liabilities by an additional 9 percent due to recent experience and changes in prescription drug costs.
- The assumed discount rate increased from 3.75 percent to 3.87 percent based on the measurement date of the valuation. The discount rate will change with each future valuation based on the bond index we rely on to set the rate under GASB 75 requirements. This change decreased liabilities by approximately 1 percent.
- A more detailed analysis of the gain/loss can be found later in this report.

WHAT'S NEW TO THE REPORT?

The following changes were made to this report:

- Reporting Requirements: GASB Statements No. 74 and 75 replaced GASB Statements No. 43 and 45. For more information on the new requirements, please refer to the **Background** section of this report and GASB's website.

II. Background

OTHER POSTEMPLOYMENT BENEFITS

For purposes of LEOFF 1, OPEB are benefits that are provided to retired employees beyond those provided by their pension plans. Such benefits include medical, prescription drug, dental, vision, and Long-Term Care (LTC) insurance. LEOFF 1 employers pay 100 percent of "necessary medical services" for LEOFF 1 retirees.

NECESSARY MEDICAL SERVICES

The medical benefit, set up under *RCW 41.26.150(1)*, provides free medical and LTC coverage for LEOFF 1 retirees. When a LEOFF 1 member retires, the employer they retire from is responsible for the full cost of any postemployment medical benefits. A list of the minimum services employers must reimburse a retiree is provided in the **Appendices**.

Individual local disability boards administer the LEOFF 1 medical plan. Different boards interpret the language "necessary medical services" differently. For example, one board may deem dental services as necessary and reimburse the member for the costs, whereas another board may deem dental services as "quality of living" and not reimburse the member.

INSURANCE

Insurance allows the LEOFF 1 employers to control the volatility in annual medical service costs. For example, if a LEOFF 1 employer only has one retiree, the ongoing annual costs will vary widely depending on whether that retiree had a relatively healthy year or for instance, entered LTC. When many employers group together in an insurance pool, they will be able to pay a steadier annual amount to offset medical service costs. The Legislature has approved of this practice by codifying it in *RCW 41.26.150(4)*.

Certain associations have established insurance funds LEOFF 1 employers may participate in. County Commissioners have established the Washington Counties Insurance Fund. The Association of Washington Cities has established the Association of Washington Cities Employees Benefit Trust, which provides indemnity coverage as well as Health Maintenance Organization (HMO) coverage. The Washington Fire Commissioners Association also provides a plan with indemnity and HMO coverage. Most LEOFF 1 employers have joined their respective association's medical plans.

The remaining LEOFF 1 employers not opting to join their association's medical plan have several other options. Some obtain coverage through union health and welfare plans (e.g., Teamsters). Some contract through other individual insurance providers. Self-insurance is another option for LEOFF 1 employers, which a number of the larger political subdivisions have selected.

OPEB FINANCIAL REPORTING REQUIREMENTS

Before 2007, these medical services were not projected and accounted for under an accrual basis. Accrual accounting is meant to match the timing between when something occurs and when it is accounted for. In this case, it is intended to match the expense to the year in which the benefits are earned by the member.

Pay-as-you-go funding occurs when an employer chooses to contribute (pay) for benefits only when they occur or become due (after retirement). Before 2007, this cost was expensed as the LEOFF 1 employers in Washington State paid the current year's medical expenses.

However, the unfunded liability, the difference between what members accrue (assuming on-going future payments) and what the LEOFF 1 employers currently pay, was growing and was not accounted for under the pay-as-you-go method.

GASB Statements No. 43 and 45 (GASB 43 and GASB 45) were created in an attempt to:

- Create financial transparency.
- Create better alignment between public and private sector accounting.
- Provide clarity among bargaining groups to show the true cost of benefits over time.
- Provide employers knowledge of the true cost of benefits over time.
- Provide investors knowledge of the true long-term liabilities.
- Show the decision makers a cost that they need to recognize.

GASB 43 and 45 were replaced by GASB statements No. 74 and 75 (GASB 74 and GASB 75). GASB 74 and 75 require more extensive disclosures and supplementary information than the prior reporting requirements. Most of GASB 74 does not apply to LEOFF 1 retiree healthcare benefits, as these are not pre-funded through a qualifying trust. GASB 75 is effective for employer fiscal years beginning after June 15, 2017, and requires employers to disclose key plan measures relative to their plan members, including the total OPEB liability and OPEB expense.

In addition to requiring new tables, GASB 75 has two key changes in assumptions and methodology from GASB 45. First, GASB 75 requires the use of the EAN cost method to measure AAL while the previous statement allowed for various acceptable actuarial cost methods. Cost methods vary in the manner in which they allocate benefits to past and future time periods. The EAN cost method is referred to as the TOL in GASB 75. Also, the discount rate for plans without a dedicated trust fund will be based on a 20-year municipal bond index which means the discount rate will fluctuate from year to year.

The statewide LEOFF 1 OPEB liability is not included in any accounting report; however, local employers are required to disclose their most recent GASB 75 liability in their annual financial statements. Rating agencies, such as Moody's, Fitch, and Standard & Poor's, analyze OPEB liabilities. Bond ratings, and the related cost of capital, may be impacted by a government's unfunded OPEB liabilities. However, the resulting analyses will not necessarily have a negative impact on ratings. These agencies will consider whether a plan is in place to manage these liabilities, look at the entity's ability to meet their budget, and analyze the size of the unfunded OPEB liability compared to payroll, budget, and tax base when making their determinations.

ACTUARIAL VALUATION

An actuary performs an actuarial valuation to estimate what benefits will be paid throughout the future lifetimes of current members, and then discounts those payments back to the present. The result is the Present Value of Future Benefits (PVFB). For example, a dollar amount today, equal to the PVFB, could be invested during plan members' lifetimes to pay all future benefits when the members are eligible. In this case, the benefit payments are the medical service costs for the LEOFF 1 retirees.

Under an actuarial valuation, an actuary needs inputs such as participant data, benefit provisions, and assumptions. Participant data includes age, membership service, employment status, etc. Benefit provisions include the structure of the benefits that the members receive — in this case, the retiree medical benefits paid by employers. Assumptions include the discount rate, medical trends, decrement rates (or rate of leaving retirement system), medical and LTC costs, etc.

An actuary values these inputs using an actuarial cost method. The chosen cost method allocates costs between past and future plan membership service before retirement. Distinct actuarial cost methods produce somewhat different allocations since each method allocates cost differently. The EAN cost method required under GASB 75 allocates plan benefits so they are earned, or accrued, as a level percentage of pay throughout an employee's working lifetime.

FUNDING POLICY

The LEOFF 1 medical expenses are funded on a pay-as-you-go basis, meaning that LEOFF 1 employers pay these costs as they occur. This generally means today's taxpayers of cities with retired LEOFF 1 members are paying for benefits that were earned in the past. This funding policy is in conflict with the principle of intergenerational equity, where the goal is to fund a member's benefit over their working lifetime. Intergenerational equity occurs when the member's benefits are paid by the taxpayers who benefit from the member's service, as opposed to making future taxpayers, who do not benefit from the member's service, pay for the member's benefits.

If employers choose to pre-fund these obligations then short-term budgetary costs increase but the future costs could decrease through any realized investment returns. In addition to lower future costs, pre-funding would be more consistent with intergenerational equity.

The *2018 PEBB OPEB Report* includes a more detailed discussion on funding policy which includes considerations between pay-as-you-go and pre-funding of OPEB liabilities.

III. Actuarial Exhibits

Office of the State Actuary

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Actuarial Certification Letter
Actuarial Valuation of
LEOFF 1 Medical Benefits

July 2019

This report documents the results of an actuarial valuation of the postemployment medical benefits offered by employers of the Law Enforcement Officers' and Fire Fighters' Retirement System Plan 1 (LEOFF 1). The primary purpose of this valuation is to determine the statewide LEOFF 1 Other Postemployment Benefits liability as of June 30, 2018. This valuation should not be used for other purposes. Individual employers should not use this report to satisfy their individual reporting requirements under Governmental Accounting Standards Board (GASB). Please replace this analysis with the results of our next report when available.

The valuation results presented in this report are not used for financial reporting, and therefore are not restricted by financial reporting requirements under GASB Statement No. 75 (GASB 75). However, we performed our analysis using assumptions and methodology consistent with GASB 75.

The Department of Retirement Systems (DRS) provided the member data, as of June 30, 2018, used in this report. We checked the data for reasonableness as appropriate based on the purpose of the valuation. An audit of the participant data was not performed. We relied on all the information provided as complete and accurate. In our opinion, this data is adequate and complete for the purposes of this valuation.

The valuation results summarized in this report require assumptions about future economic and demographic events. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in plan provisions or applicable law.

There is no established trust fund dedicated to these benefits, therefore no assets were accounted for in this valuation. As there is no dedicated trust, GASB 75 requires the discount rate to be based on a 20-year, tax exempt, high-quality municipal bond rate. We rely on the Bond Buyer General Obligation 20-Bond Municipal Index at the measurement date. The remaining non-healthcare economic and demographic assumptions[1] are the same as those used in the *June 30, 2017, Actuarial Valuation Report* (AVR) of the DRS-administered pension systems.

[1]*Developed from the 2007-2012 Demographic Experience Study and 2017 Economic Experience Study performed by OSA. OSA will complete a new economic and demographic experience study in the fall of 2019 and 2020, respectively.*

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The Office of the State Actuary (OSA) contracted with Milliman to prepare healthcare assumptions for this valuation, which include medical trends, long-term care trend, claims costs and Medicare coverage. Milliman communicated the recommended healthcare assumptions in a letter dated April 15, 2019. For more information, please see the Gain/Loss analysis in the **Actuarial Exhibits** section. Milliman also performed analysis on the impact of the excise tax on "Cadillac" plans under the Patient Protection and Affordable Care Act. As a result, Milliman provided medical trend assumptions both with and without the excise tax. We prepared the results of this report using assumptions that include the excise tax, but also illustrated the liability impact of not including the excise tax assumptions as part of the **Actuarial Exhibits** section. The inclusion of this excise tax in the report does not represent tax advice or an opinion that this tax applies to this plan.

OSA does not employ healthcare actuaries, so we are not qualified to judge the reasonableness of the complete set of assumptions. However, we did have discussions with Milliman about the healthcare assumptions to understand how they were determined, ensure consistency with the other economic assumptions, and clarify what may have caused the assumptions to change from the prior valuation.

In our opinion, all data, assumptions, methods, and calculations are appropriate and conform to generally accepted actuarial principles and standards of practice as of the date of this publication.

The undersigned, with actuarial credentials, meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. While this report is intended to be complete, we are available to offer extra advice and explanations as needed.

Lisa A. Won, ASA, FCA, MAAA
Deputy State Actuary

Michael T. Harbour, ASA, MAAA
Actuary

GASB 75 RESULTS - FOR ALL LEOFF 1 EMPLOYERS

The primary purpose of this valuation is to determine the statewide LEOFF 1 OPEB liability. The statewide liabilities are not used for financial reporting but we provide this section to discuss the tables local employers are required to produce in order to be compliant with GASB 75.

On an annual basis, local employers of LEOFF 1 members are required to provide the following tables that summarize OPEB liabilities:

- Schedule of Changes in the TOL.
- OPEB Expense.
- Deferred Outflows and Inflows of Resources.
- Subsequent Recognition Years.
- Sensitivity of the TOL to Changes in Healthcare Trend and Discount Rate Assumptions.
- Summary of Plan Participants.
- Disclosure of Assumptions and Methodology.

The **Schedule of Changes in TOL** table reconciles the change in the TOL from the prior year's valuation. A statewide valuation was not produced for LEOFF 1 OPEB last year; however, we performed a reconciliation of changes since the *2016 LEOFF 1 OPEB Report*. Please see the *Change in TOL by Source* table as part of the Gain/Loss Analysis later in this section.

The reconciliation is also used to calculate the components of the **OPEB Expense** table. Given the maturity of LEOFF 1, all OPEB Expense table components match the TOL reconciliation described above. This is because the differences between expected and actual experience, and the assumption changes, are amortized, or spread out, over a one-year period (or rather, are recognized immediately). Under GASB 75, the amortization time period equals the average of the expected remaining service lives of all active and inactive members that are provided with OPEB through the OPEB plan. LEOFF 1 is more than 99 percent retired, therefore the amortization period is one year.

LEOFF 1 does not have deferred outflows or inflows since all costs are recognized immediately. As such, the **Deferred Outflows and Inflows of Resources** table and the **Subsequent Recognition Years** table both would display all zeroes.

GASB 75 also requires an analysis of the impact of changing the Healthcare Trend and Discount Rate assumptions by 100 basis points. Please see the **Sensitivity Analysis** later in this section for details on how the statewide liability can change under a different set of assumptions.

We relied on data as of the June 30, 2018, valuation date. Please see the **Participant Data** section for details on the data used.

ACTUARIAL ACCRUED LIABILITY

The EAN cost method is the only actuarial cost method allowed under GASB 75 reporting requirements. The prescribed method allocates plan benefits so they are earned as a level percentage of pay throughout an employee's working lifetime. The liabilities under the EAN cost method are the employer's total accrued (or earned) liability from the retiree medical benefits offered by LEOFF 1 employers. These liabilities are based on all service earned as of the valuation date. The AAL under the EAN cost method is also referred to as the TOL in GASB 75.

The table below shows the TOL, as of the June 30, 2018, valuation date, and shows which portion is attributable to medical and LTC benefits.

Total OPEB Liability	
(Dollars in Thousands)	
Medical*	$1,365,976
Institutional Long-Term Care	507,348
Non-Institutional Long-Term Care	421,202
Total	**$2,294,526**

**Includes medical claim costs and reimbursement of Medicare Part B premiums.*
Note: Totals may not agree due to rounding.

The LEOFF 1 OPEB liability will not significantly change if a different actuarial cost method is used due to the maturity of the plan. The plan is more than 99 percent retired so almost all future benefits have been earned.

GAIN/LOSS ANALYSIS

The results of this report are based on assumptions about future economic and demographic events. It is important to note over time how actual events differed from those assumptions. An event that causes the plan to cost less than was expected is described as a gain to the plan. An event that causes the plan to cost more than was expected is described as a loss to the plan. An analysis of the gains and losses between the last valuation and this year's valuation shows which events are attributable to the change in expected cost of the plan.

The first table shows the development of the expected change in the liability since the last valuation. Overall we expected the liability to decrease by about 1 percent due to:

- Two years of expected retiree benefit payments (disbursements) decreases the liability.
- Active employees accruing additional benefits (normal cost) and two fewer years of discounting (interest) both increase the liability.

Expected Change in TOL	
(Dollars in Thousands)	
6/30/2016 TOL	**$2,679,037**
Normal Cost	3,044
Interest	204,928
Disbursements	(245,115)
6/30/2018 Expected TOL	**2,641,893**
Expected Change in TOL	**($37,143)**

The end of year liability will change by more than just the expected change in liability. The other two major sources are liability (gain)/loss and incremental changes. A liability (gain)/loss examines how new census data compares to what we expected. Incremental changes reflect changes in assumptions and methodology since the prior valuation. The next table reconciles the change in liability from beginning of year to end of year by these sources.

In total, the liability (gain)/loss section increased liabilities by approximately 1 percent. Given the maturity of the plan, we do not expect significant change in liability (gain)/loss. We observed fewer deaths than expected which resulted in a 1 percent increase in liabilities. Other sources of liability (gain)/loss — such as termination, retirement, and disability — compare active member experience to expectations. We do not expect material change outside of mortality since so few active members remain in the plan.

In total, the incremental changes reduced liabilities by approximately 14 percent as summarized below.

- **Discount Rate Change:** The discount rate increased from 3.75 percent to 3.87 percent with the new measurement date which decreased liabilities by 1 percent.
- **Update Costs:** We received new healthcare cost assumptions from Milliman. Updating the healthcare costs decreased liabilities by 9 percent.
    - **Medical Claim Costs:** The medical claim cost assumptions can be volatile, as they are developed using data[2] from a short time period (2015 through 2017). Non-Medicare claim cost assumptions increased due to a change in Milliman's methodology. However, most LEOFF 1 retirees are Medicare eligible. The Medicare medical claim cost assumptions decreased due to recent experience and prescription drug costs that were less than previously assumed.
    - **Medicare Part B Premiums:** The assumption for reimbursement of Medicare Part B premiums relies on calendar year 2018 and 2019 premiums, which could lead to volatility in the assumption due to the short time period of data. The new assumption is approximately $100 lower annually, per member, from what we expected in the prior valuation.
    - **LTC Costs:** The LTC cost assumption has three components (incidence rate, duration, and care costs). The incidence rate assumptions decreased and the duration assumptions increased from the prior valuation. This means retirees are less likely to receive LTC, but those who receive it are expected to remain in LTC

[2] *Data relies on information gathered for the City of Tacoma LEOFF 1 firefighters and police and the Association of Washington Cities.*

for a longer period of time. Meanwhile, the expected annual cost of LTC is now less than assumed from the prior valuation.

- **Update Healthcare Trends:** We received new assumptions for healthcare trends from Milliman. The updated healthcare trends decreased liabilities by 3 percent.
  - **Medical Cost and Medicare Part B Premium Trends:** These trends are generally lower than the prior valuation due to lower prescription drug trends and our office's lower long-term inflation assumption.
  - **LTC Trend:** No change in this assumption since the prior valuation.

Change in TOL by Source	
(Dollars in Thousands)	
6/30/2016 TOL	**$2,679,037**
Expected Change in Liability	**($37,143)**
Liability (Gain)/Loss	
Termination	$110
Retirement	938
Mortality	23,495
Disability	(12)
Other Liabilities	558
Total Liability (Gains)/Losses	**$25,088**
Incremental Changes	
Plan Changes	$0
Method Changes	0
Discount Rate Change	(34,297)
Update Costs	(249,791)
Update Healthcare Trends	(88,368)
Total Incremental Changes	**($372,456)**
Total Change	**($384,511)**
6/30/2018 TOL	**$2,294,526**

If additional information is needed about the healthcare assumptions or the gain/loss analysis, please contact our office.

SENSITIVITY ANALYSIS

A single point estimate is only the start of understanding the liabilities. This estimate will only be realized if future economic and demographic experience matches our assumptions. It is equally important to understand what will happen if the economic and demographic experience is different than we assumed.

GASB 75 is not applicable to the valuation of statewide LEOFF 1 OPEB liabilities, since they are not used for financial reporting. However, we consider the same sensitivity analysis for this report as required under GASB 75. Below, we analyze the impact of changing the Healthcare Trend and Discount Rate assumptions by 100 basis points.

Sensitivity Analysis - Medical and LTC Trends			
(Dollars in Thousands)	**1% Decrease**	**Current Trend Rate**	**1% Increase**
Total OPEB Liability	**$2,070,333**	**$2,294,526**	**$2,554,414**

Sensitivity Analysis - Discount Rate			
(Dollars in Thousands)	**1% Decrease**	**Current Discount Rate**	**1% Increase**
Total OPEB Liability	**$2,573,293**	**$2,294,526**	**$2,059,598**

The valuation results for this report include the impact of the excise tax[3] under the Patient Protection and Affordable Care Act, but we also examined the impact of excluding the excise tax. The next table shows the results of excluding the excise tax.

Sensitivity Analysis - Impact of Excise Tax		
(Dollars in Thousands)	**w/o Excise Tax**	**w/ Excise Tax**
Total OPEB Liability	**$2,153,892**	**$2,294,526**

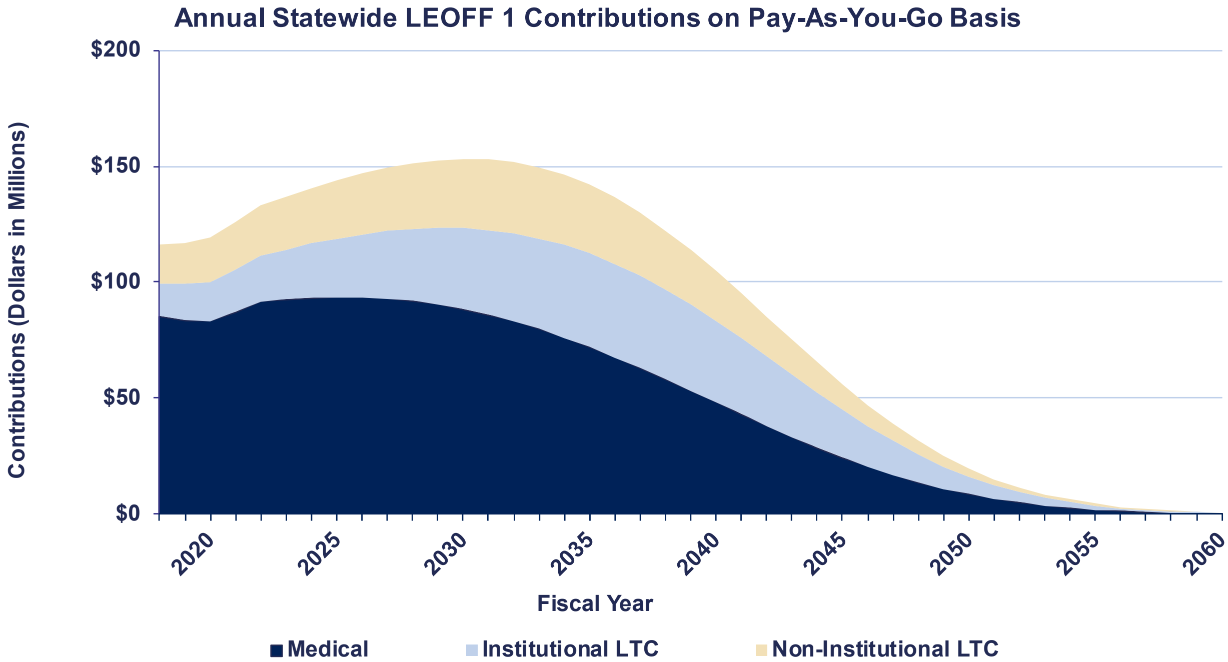
PROJECTIONS

It is helpful to look at the projections of the benefit payments (or employer contributions) in order to determine whether the payments are manageable. Projections allow decision makers to prepare for these obligations by providing information regarding what costs could lie ahead.

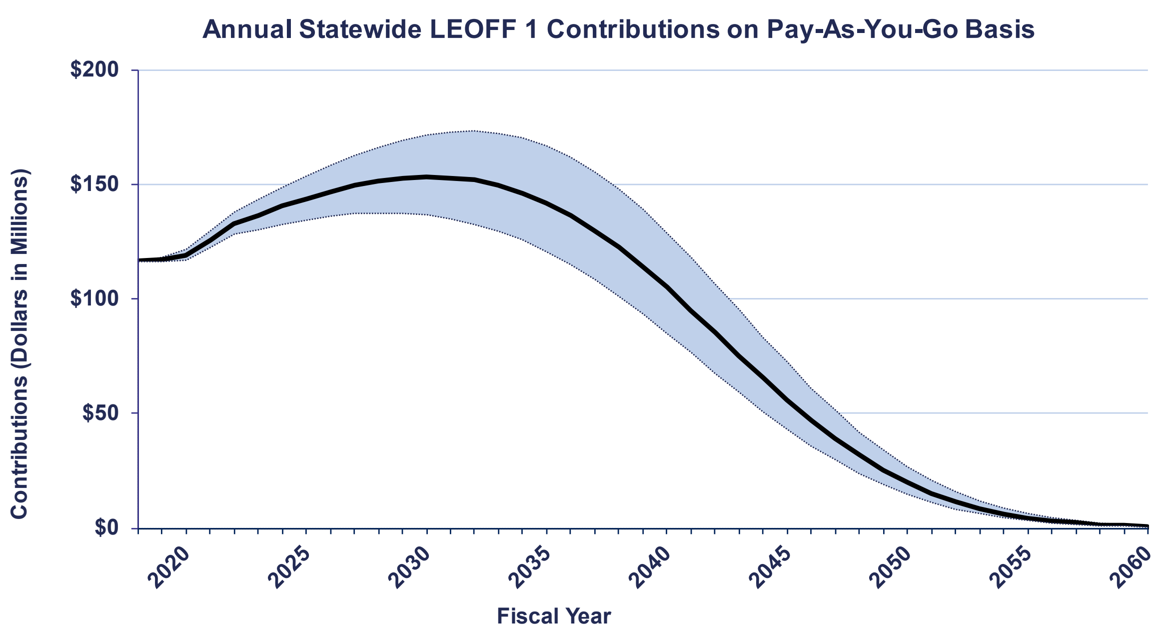
We project what the stream of contributions will look like with a pay-as-you-go funding policy for the current members for the next 40 years. Up until year 2030, the annual contributions increase as a result of the large number of retirees and high assumed medical inflation. After year 2030, the annual contributions will reach a peak and decrease to zero in the long-run as the retiree population starts to decline and the projected medical inflation slows down.

In addition to total contributions, the graph below shows the breakdown between medical costs, institutional LTC, and non-institutional LTC. The slight increase around the year 2022 is attributable to the estimated impact of the excise tax reflected in the healthcare trend assumptions.

[3] *Link: Affordable Care Act Cadillac Tax | Cigna.*



The graph above focuses on our current expectations for medical inflation. However, the results can vary under a different set of assumptions. The next graph displays how the projected employer contributions can change if the medical trends are either 1 percent lower or 1 percent higher than assumed. The shaded region displays the range of results if the medical trends are 1 percent lower or higher than the current expectations.



IV. Participant Data

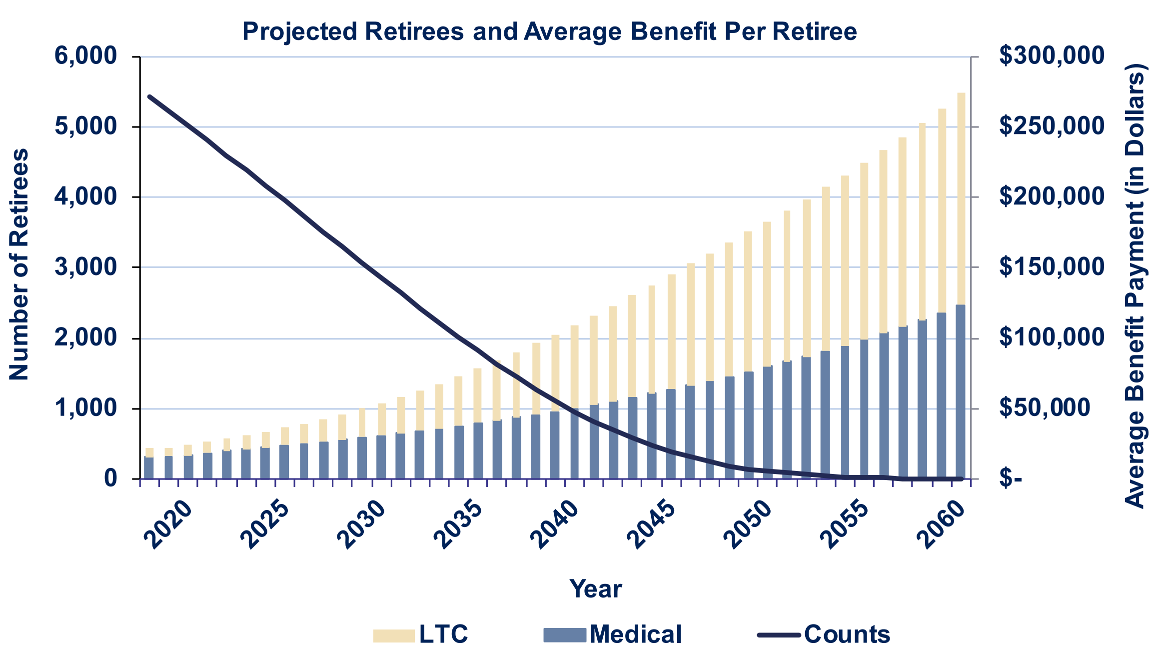
SUMMARY OF PLAN PARTICIPANTS

The law enforcement officers, other than the commissioned officers of the Washington State Patrol, and fire fighters of Washington State have retirement coverage under one of two plans within LEOFF. Members first employed prior to October 1, 1977, are in LEOFF Plan 1 (LEOFF 1). Members first employed on or after October 1, 1977, are in LEOFF Plan 2 (LEOFF 2). All LEOFF 1 members are eligible for employer-provided retiree medical. The table below includes a breakdown of the active and inactive members that are receiving employer-provided retiree medical currently or eligible to receive employer-provided retiree medical in the future. Any retiree medical benefits offered to members of LEOFF 2 are outside the scope of this report.

Summary of LEOFF 1 Plan Participants	
Active Members	
Number	26
Average Age	67
Average Service	42
Average Salary	$108,832
Inactive Members*	
Number	5,424
Average Age	74

**Includes retirees and terminated vested members and excludes survivors.*

Since LEOFF 1 is a closed plan, meaning new hires cannot enter the plan, the population count is expected to steadily decline in future years. As the population ages, the average amount paid per retiree will increase. A portion of this increase is due to inflation (a dollar in the future is not expected to be worth as much as a dollar today), but the increase is primarily attributable to the aging population and current members entering LTC in the future. The next graph shows the projected population and the average annual healthcare benefit payment (medical and LTC) per LEOFF 1 retiree.



SUMMARY OF EMPLOYERS

The following table summarizes the LEOFF 1 members as of the measurement date by status, job type, and major employer category.

Employee Count By Employer Type and Status						
Employer Type	Active	Terminated Vested	Service Retiree	Duty Disability	Non-Duty Disability	Total
Police						
First Class City	6	0	725	486	96	1,313
Other City	1	1	352	362	71	787
County	5	0	423	341	83	852
Total Police	**12**	**1**	**1,500**	**1,189**	**250**	**2,952**
Firefighters						
First Class City	10	0	434	1,059	49	1,552
Other City and Fire Protection Districts	4	0	439	391	53	887
County and Port	0	0	27	22	10	59
Total Firefighters	**14**	**0**	**900**	**1,472**	**112**	**2,498**
Total Members	**26**	**1**	**2,400**	**2,661**	**362**	**5,450**

V. Assumptions

We use both economic and demographic assumptions to determine liabilities for this valuation. This section summarizes our assumptions.

ECONOMIC ASSUMPTIONS

The economic assumptions are used in the actuarial valuation to determine liabilities and benefit payments in the future. For presentation purposes, they are shown separately for non-healthcare and healthcare.

The **non-healthcare** economic assumptions are summarized in the table below.

Non-Healthcare Economic Assumptions		
Discount Rate[1]	End of Year (June 30, 2018)	3.87%
Inflation[2]		2.75%

[1] *Annual rate, compounded annually.*

[2] *Based on the CPI: Urban Wage Earners & Clerical Workers, Seattle-Tacoma-Bremerton, WA - All Items.*

The inflation assumption is a building block component of the healthcare trend rates and reflects our office's current assumption for future inflation. This assumption is studied by our office every two years as part of the Economic Experience Study (EES). Please see our website for the most recent study: *2017 EES Report*. The LEOFF 1 OPEB are not salary-based benefits, however we rely on a salary growth assumption to complete this analysis based on the GASB 75 prescribed EAN cost method. All other non-healthcare economic assumptions, including salary growth, are consistent with assumptions presented in the *June 30, 2017 AVR*.

The **healthcare** economic assumptions specify how we expect the healthcare costs and utilization of service to grow in the future. We relied on healthcare actuaries at Milliman to determine the healthcare economic assumptions.

The medical cost trends used in valuing GASB 75 liabilities include the excise tax, but Milliman also prepared these trends without impact of the excise tax. We analyzed the impact of this assumption as part of the **Actuarial Exhibits**.

Costs are expected to grow in the future for medical claims, Medicare Part B premiums, and LTC. We project future growth using the healthcare trend rates. The healthcare trends will vary for each type of cost and by Medicare eligibility. The non-Medicare (under age 65) trends are shorter because all active employees are expected to reach age 65 by 2022.

Healthcare Trends				
Under Age 65				
Year	**Medical Cost w/ Excise Tax**	**Medicare Part B**	**LTC**	**Medical Cost w/o Excise Tax**
2018	6.4%	N/A	4.5%	6.4%
2019	6.1%	N/A	4.5%	6.1%
2020	22.5%	N/A	4.5%	5.4%
2021	19.1%	N/A	4.5%	5.1%
2022+	5.3%	N/A	4.5%	5.1%
Over Age 65				
Year	**Medical Cost w/ Excise Tax**	**Medicare Part B**	**LTC**	**Medical Cost w/o Excise Tax**
2018	6.0%	2.6%	4.5%	6.0%
2019	5.6%	4.7%	4.5%	5.6%
2020	11.3%	4.6%	4.5%	5.3%
2021	10.8%	4.9%	4.5%	5.1%
2022	5.7%	5.9%	4.5%	5.1%
2023	5.8%	5.7%	4.5%	5.1%
2024	5.8%	5.0%	4.5%	5.1%
2025	5.7%	5.4%	4.5%	5.1%
2026	5.7%	5.9%	4.5%	5.1%
2027	5.7%	5.6%	4.5%	5.1%
2028	5.7%	5.6%	4.5%	5.1%
2029	5.7%	5.3%	4.5%	5.1%
2030	5.7%	5.1%	4.5%	5.1%
2040	5.7%	4.5%	4.5%	5.3%
2050	5.3%	4.4%	4.5%	5.1%
2060	5.2%	4.4%	4.5%	5.0%
2070	4.6%	4.4%	4.5%	4.5%
2080	4.4%	4.3%	4.5%	4.3%
2090+	4.4%	4.3%	4.5%	4.3%

Note: For display purposes, tables were summarized. The full table is available upon request.

The retiree medical costs and the Medicare premiums are displayed in the next table. The tables are broken into medical costs for non-Medicare and Medicare aged populations, as well as reimbursement of Medicare Part B premiums. For this valuation, we assume all LEOFF 1 employers reimburse the Medicare Part B premiums.

Annual Retiree Medical Cost and Medicare Premiums By Age			
	Non-Medicare	Medicare	
Age	Medical	Medical	Part B Premiums
60	$44,795	N/A	N/A
61	$46,401	N/A	N/A
62	$48,064	N/A	N/A
63	$50,945	N/A	N/A
64	$53,998	N/A	N/A
65	N/A	$11,705	$1,617
72	N/A	$13,024	$1,617
77	N/A	$13,754	$1,617
82	N/A	$13,890	$1,617
89+	N/A	$13,078	$1,617

**For display purposes, tables were summarized. Costs between ages are linearly interpolated.*

Note: Table displays the average annual cost per person (in dollars).

LTC is also available to eligible LEOFF 1 retirees. There are two types of LTC covered under LEOFF 1 OPEB:

1. Institutional: Care provided in a nursing home or wing of a hospital designed to provide nursing care services or an assisted living facility, including:
    a) Skilled – includes nursing and rehabilitation services that can only be performed by skilled medical personnel; must be under orders of a physician and provided on a 24-hour basis.
    b) Intermediate – includes continuous treatment not meeting all the requirements for skilled care.
    c) Custodial – includes assistance in carrying out daily living activities.
2. Non-Institutional: Includes all home health and adult day-care services.

The three primary assumptions for LTC are the incidence rate (likelihood of entering LTC), the duration (length of stay), and the annual cost. The following table shows these assumptions separately for Institutional Care and Non-Institutional Care.

Long-Term Care						
	Institutional Care			Non-Institutional Care		
Age	Annual Incidence Rate	Duration (in Years)	Annual Cost*	Annual Incidence Rate	Duration (in Years)	Annual Cost
55	0.08%	2.21	$87,060	0.40%	2.13	$64,068
62	0.15%	2.20	$87,060	0.68%	2.08	$64,068
67	0.28%	2.17	$87,060	1.00%	2.16	$64,068
72	0.58%	2.14	$87,060	1.52%	2.20	$64,068
77	1.38%	2.10	$87,060	2.50%	2.22	$64,068
82	2.94%	2.15	$87,060	3.86%	2.25	$64,068
87	5.73%	2.05	$87,060	6.18%	2.17	$64,068
92	10.67%	1.82	$87,060	8.39%	1.87	$64,068
97	15.01%	1.54	$87,060	8.41%	1.71	$64,068

**Based on an assumed blend of: 40% in Assisted Living Facilities with an average cost of $61,620, and 60% in Nursing Facilities with an average cost of $104,028.*

Note: Table displays the average annual cost per person (in dollars).

The LTC table can be interpreted as follows: A 72-year-old LEOFF 1 retiree has a 0.58 percent chance of entering institutional care this year. If the member enters institutional care this year, the member is expected to stay approximately 26 months (2.14 years) at an anticipated cost of $87,060 in the first year. The annual LTC cost increases each year in our valuation model by 4.5 percent.

DEMOGRAPHIC ASSUMPTIONS

Demographic assumptions include rates of decrement (rates at which members are expected to exit employment or retirement status: retirement, termination, disability, and mortality), as well as participation percentage and Medicare coverage. The probabilities of decrement are consistent with those presented in the *June 30, 2017 AVR*.

Participation percentage refers to how many current active members will choose to use the employer subsidized medical coverage. We relied on Milliman for the Medicare coverage assumption which refers to how many retirees are covered by Medicare.

Demographic Assumptions	
Participation Percentage	100%
Medicare Coverage	100%

VI. Appendices

SUMMARY OF PLAN PROVISIONS

All remaining active members are eligible for retirement and are expected to receive postemployment medical benefits.

Each disability board has the discretionary power to determine which costs they will reimburse and which costs they will not reimburse. However, there is a list of minimum services for which they must reimburse the retiree, as defined in RCW 41.26.030(20). These services are outlined below:

- Hospital board and room not to exceed semi-private, unless condition requires otherwise.
- Hospital services, other than board and room.
- Licensed physicians or surgeons.
- Licensed osteopaths.
- Licensed chiropractors.
- Charges of a registered graduate nurse.
- Physician-prescribed drugs and medications.
- Diagnostic X-ray and laboratory examinations.
- X-ray, radium, and radioactive isotopes therapy.
- Anesthesia and oxygen.
- Rental of durable medical and surgical equipment.
- Artificial limbs and eyes; and casts, splints, and trusses.
- Professional ambulance services to transport to or from a hospital.
- Dental charges resulting from accidental injury to the teeth if treatment starts within 90 days.
- Nursing home confinement or hospital extended care facility.
- Physical therapy by a registered physical therapist.
- Blood transfusions.
- Licensed optometrists.

The list above represents a summary of minimum services, and does not determine the overall medical benefits for each individual. Ultimately, each disability board determines which services to reimburse.

THE OFFICE OF THE STATE ACTUARY'S WEBSITE

Our *website* contains additional information and educational material not included in this report. The site also includes an archive of prior actuarial valuation reports and other recent studies that OSA had produced. The following is a list of materials found on our website that could be useful to the reader.

GLOSSARY

Definitions for frequently used actuarial terms.

PRIOR OPEB VALUATIONS

Archive of prior OPEB valuations.

OPEB TOOLS

LEOFF 1 employers should not use this report to satisfy their individual employer reporting requirements under GASB 75. OSA created an online tool to help certain small employers calculate their individual reporting requirements. This online tool utilizes the alternative measurement method allowed under GASB 75 and can be used by eligible employers with fewer than 100 total plan members.

2007-12 DEMOGRAPHIC EXPERIENCE STUDY

Most recent report examining demographic behavior within each retirement system.

2017 REPORT ON FINANCIAL CONDITION AND ECONOMIC EXPERIENCE STUDY

Report examining the financial health of the retirement systems and long-term economic assumptions.

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