

BOARD MEETING AGENDA

November 19, 2014 - 9:30 AM



LOCATION

STATE INVESTMENT BOARD
Large Conference Room, STE 100
2100 Evergreen Park Drive S.W.
Olympia, WA 98502
Phone: 360.586.2320
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- | | |
|--|----------|
| 1. Approval of Minutes | 9:30 AM |
| 2. Social Security Bridge Option
Ryan Frost, Research Analyst | 9:35 AM |
| 3. Final Average Salary Protection
Ryan Frost, Research Analyst | 10:15 AM |
| 4. Career Extension
Paul Neal, Sr. Research and Policy Manager | 10:50 AM |
| 5. Remarriage Prohibition
Tammy Harman, Death & Disability Ombudsman
Ryan Frost, Research Analyst | 11:30 AM |
| 6. Administrative Update <ul style="list-style-type: none">• SCPP Update• Outreach Activities• Budget Update | 12:00 PM |
| 7. Report on DRS Contract Review
Steve Nelsen, Executive Director | 12:30 PM |
| 8. Final Actuarial Valuation & Audit Report
Steve Nelsen, Executive Director | 1:00 PM |
| 9. Adoption of 2015 Meeting Dates | 2:00 PM |
| 10. Agenda Items for Future Meetings | 2:30 PM |

Lunch is served as an integral part of the meeting.

In accordance with RCW 42.30.110, the Board may call an Executive Session for the purpose of deliberating such matters as provided by law. Final actions contemplated by the Board in Executive Session will be taken in open session. The Board may elect to take action on any item appearing on this agenda.



Social Security Bridge Option

Report Type:

Initial Consideration

Date Presented:

11/19/2014

Presenter Name and Title:

Ryan Frost, Research Analyst

Summary:

The Social Security Bridge Option (Bridge) would allow retirees to take an increased retirement benefit from the LEOFF 2 Trust fund until the member reaches the Social Security Full Retirement Age .

Strategic Linkage:

This item supports the following Strategic Priority Goals:
Enhance the benefits for the members.

ATTACHMENTS:

Description		Type
 SS Bridge Report		Report
 SS Bridge Presentation		Presentation



November 19, 2014

Social Security Bridge Option

INITIAL CONSIDERATION

By Ryan Frost
Research Analyst
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ISSUE STATEMENT

The Social Security Bridge Option (Bridge) would allow retirees to take an increased retirement benefit from the LEOFF 2 Trust fund until the member reaches the Social Security Full Retirement Age (SSFRA).

OVERVIEW

The Board is continually looking for ways to add benefits to the members at little to no cost to the plan. The Bridge, sometimes referred to as Leveling, is designed to provide members who retire between ages 53 and 67 with a consistent total income before and after receiving Social Security benefits.

It provides an increased allowance before SSFRA and a reduced allowance after SSFRA. It is payable to you for your lifetime only. SSFRA is age 65 for those people born before 1938. For those born later, SSFRA is between ages 65 and 67.

Any member who is paying into Social Security, 58.5% of law enforcement officers and 6.5%¹ of fire fighters, would be impacted by implementing this bridge option.

BACKGROUND & POLICY ISSUES

With this option, your monthly pension benefit payment is temporarily increased by the amount your estimated Social Security benefit will be when you hit your SSFRA. Starting the second month after your SSFRA, your pension benefit is permanently decreased by the amount of this previously estimated Social Security benefit.

There is no actuarial difference in the total amount you receive if you choose this option or if you elect to receive your pension before the SSFRA without "leveling." However, this option may provide you with the flexibility and financial resources to retire earlier than you might be able to otherwise.

¹http://leoff.wa.gov/boardmtgs/2005/BrdMtg_09.28.05/092805.9_LEOFF%20Plan%202%20Employer%20Benefit%20Survey%20Results.pdf

Example

Say you are planning for your retirement, and your initial pension payment would be \$2,000 per month starting at age 53. In a few of years when you turn 62, the earliest age to collect Social Security benefits, you will start receiving \$1,000 per month from Social Security for a total retirement income of \$3,000 at that time. If you take a Bridge option, your initial pension amount would be increased to \$2,500 and then reduced to \$1,500 when you can start to receive the \$1,000 from Social Security. The level up keeps your retirement income at a steady \$2,500 per month instead of starting your retirement earning \$2,000 and then jumping to \$3,000 per month when you start to receive Social Security.

Age	Pension	Social Security	Total \$
53	\$2500	\$0	\$2500
62	\$1500	\$1000	\$2500

Calculating Your Benefit

Benefit payments for this option are calculated using your Social Security estimate, which you would normally receive at full retirement age. To calculate this option, you would need to provide a Personal Earnings & Benefit Estimate Statement (PEBES) from the SSA based on the date you will be terminating your LEOFF 2 employment.

When you request a quote, provide the date you plan to retire from your LEOFF 2 job and ask for an estimate for full retirement (between ages 62 and 67). Make sure the estimate includes “zero future earnings” for after you stop your LEOFF 2 employment. If you fail to specify “no future earnings,” Social Security will assume you are continuing to work to full retirement age and your quote will reflect that assumption. (The annual statement you receive from SSA cannot be used to calculate a benefit.)

The amount the LEOFF trust will pay as an “acceleration” is based on your age and the number of years you are away from your SSFRA. It is important to know once the LEOFF 2 accelerated amount is determined from your Social Security estimate, it will not change (except for cost-of-living adjustments) even if your Social Security benefit turns out to be different from your estimate.

Survivor Options

A modification of this option in many plans nationwide allows for a retiree to set a 50% or 100% survivor benefit, which would continue the stream of payments throughout the designated survivors' lifetime. If your survivor were to die before you, your benefit would be bumped up to reflect the loss of a survivor option on your pension.

Advantages

The Bridge can allow you to retire earlier by providing higher initial payments from the end of your working life until you can begin drawing Social Security. It also greatly simplifies your retirement financial planning, as your income will remain consistent.

Disadvantages

First, the impact of post retirement employment, even part-time, has a drastic effect on Social Security. If the retiree continues to work in retirement, they will lose \$1 for every \$2 they earn above about \$14,000 a year.

Second, at your SSFRA, your benefit will drop—often significantly – possible to zero. Often, retirees forget the reduction will occur and are unprepared when it happens.

SUPPORTING INFORMATION

Appendix A: Medicare Gap Option Oklahoma

APPENDIX A

Medicare Gap Option in Oklahoma

The 2004 Oklahoma Legislature passed a bill that would allow for this type of bridge option to be tied to Medicare rather than Social Security.

This option allows those who retire before becoming Medicare eligible to receive a higher benefit to cover the cost of health insurance until that person becomes Medicare eligible. The year after that person becomes Medicare eligible, his or her retirement benefit will be reduced. The total benefits payable to the member over a lifetime will remain essentially the same, on average, and the calculation of the benefit must be actuarially neutral.

The option must be chosen prior to retirement, and if a member chooses this option, such election is irrevocable.



Social Security Bridge Option

Initial Consideration
November 19, 2014

Issue

The Social Security Bridge Option would allow retirees to take an increased retirement benefit from the LEOFF 2 Trust fund until the member reaches the Social Security Full Retirement Age (SSFRA).

Overview

Bridge Option Basics

- Designed to provide members who retire between ages 53 and 67 with a consistent total income throughout their lives
- Provides an increased allowance from trust fund before SSFRA, and a reduced allowance after SSFRA
- Any member who is paying into Social Security, 58.5% of law enforcement officers and 6.5% of fire fighters, would be impacted by implementing this bridge option

Background

Actuarial Equivalence

- There is no actuarial difference in the total amount you receive with or without this Bridge Option
- May provide you with the flexibility and financial resources to retire earlier than you might be able to otherwise

Example

Basic Calculation with Bridge Option

- \$2000 per month pension benefit at 53
- \$1000 per month Social Security benefit at 62

Age	Pension	Social Security	Total \$
53	\$2500	\$0	\$2500
62	\$1500	\$1000	\$2500

How Does it Work?

- Benefit payments for this option are calculated using your Social Security estimate, which you would normally receive at full retirement age
- The amount the LEOFF trust will pay as an “acceleration” is based on your age and the number of years you are away from your SSFRA (Social Security Full Retirement Age)

Survivor Options

Most plans nationwide allow for a retiree to set a survivor benefit

- 50%, more money to the retiree
- 100%, more money to the survivor
- Payments guaranteed throughout the designated survivors' lifetime

Advantages

More Money Up Front

- Social Security leveling option can allow you to retire earlier if your standard benefit isn't enough to live on

Simplicity

- The bridging option can also greatly simplify retirement financial planning, as your income will remain consistent

Disadvantages

Post-Retirement Employment

- The impact of post retirement employment, even part-time, has a drastic effect on Social Security
- If the retiree continues to work in retirement, they will lose \$1 for every \$2 they earn above about \$14,000 a year

Benefit Drop after SSFRA

- Your benefit will drop after SSFRA — often significantly — even to zero
- Often, retirees forget the reduction will occur and are unprepared when it happens

Questions?

Contact:

Ryan Frost

Research Analyst

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Final Average Salary Protection

Report Type:

Comprehensive Report Follow-up

Date Presented:

11/19/2014

Presenter Name and Title:

Ryan Frost, Research Analyst

Summary:

Members' retirement benefits will be reduced if "temporary salary reductions" after July 1, 2013 occur during their Final Average Salary (FAS) period.

Strategic Linkage:

This item supports the following Strategic Priority Goals:
Enhance the benefits for the members.

ATTACHMENTS:

Description	Type
📎 FAS Protection Report	Report
📎 FAS Protection Presentation	Presentation



November 19, 2014

FINAL AVERAGE SALARY PROTECTION

COMPREHENSIVE REPORT

By Ryan Frost

Research Analyst

360-586-2325

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ISSUE STATEMENT

Members' retirement benefits will be reduced if "temporary salary reductions" after July 1, 2013 occur during their Final Average Salary (FAS) period.

OVERVIEW

There are 16,687 active members in LEOFF Plan 2 according to the *2013 Actuarial Valuation Report*. FAS protection affects only those active members who plan to retire within the next 5-7 years, and who are furloughed during their FAS period.

BACKGROUND & POLICY ISSUES

Furloughs are a method used for reducing salary and saving costs and have been utilized by employers during the recent economic downturn. These reductions can take many forms and may be either voluntarily or involuntarily unpaid leave (furlough), a temporary reduction in salary, or the loss of previously negotiated raises.

A member's benefit is calculated using the formula; 2 percent, times FAS times years of service (YOS). If a member's salary is reduced during their FAS period, it lowers their FAS, and thus lowers their benefit. Final average salary calculations were legislatively protected from being impacted by furloughs for 2009-2011 and 2011-2013. That protection ended July 1, 2013.

This report defines furloughs and why they were enacted, as well as the issue they present to an employees' pension. Furthermore, this report gives a detailed legislative history of furlough protections for employees currently in their FAS period. Lastly is a brief discussion of lifetime impacts if these protections are not renewed by Legislative action.

In today's economic environment many local and state governments are facing revenue shortfalls. There may be some public service programs discontinued or restricted and there may be some employee layoffs as a result of budget restrictions. In order to balance budgets, many state and local governments, as an alternative to layoffs, are considering many ways to decrease costs.

Furloughs, a leave of absence without pay, are one method currently being used by many public employers. One advantage of using furloughs versus layoffs is employees are not terminated, yet there is a cost savings as the time off is without pay. Also, when the economy recovers there is no need to rehire and retrain the workforce. However, there are some potential negative impacts with the use of furloughs. One impact it could have is on a member's pension calculation if the furlough were to occur during the member's final average salary (FAS) period.

The LEOFF 2 Board has previously studied this issue in the 2005, 2009, and 2010 interims.

Legislative History

The Legislature has taken several actions to prevent these decreases from reducing pensions, however, the legislative protection for final average salary computations ended July 1, 2013. Legislation introduced to extend final average salary protections through 2013-2015 did not pass in the 2013 session.

2009 Session – PERS Provided Protection for 2009-2011

During the 2009 Legislative Session, the Legislature recognized the potential impacts to a members pension benefit through the use of furloughs to help balance budgets. As a result, the Legislature passed SB 6157 (see Appendix B to see a copy of the final bill report) which allowed the pension benefit calculation to be adjusted for furloughs if the furlough occurred during the member's FAS period. While this did address the problem, it only included the Public Employees' Retirement System (PERS) pension system. Members of the other retirement systems, including LEOFF Plan 2, would not be granted the same benefit calculation adjustment. This difference in policy led the Board to send a letter to the Select Committee on Pension Policy (SCPP) to jointly sponsor legislation similar to SB 6157.

2010 Session – State Employees Provided Protection for 2009-2011

State agencies were directed to achieve a \$69.154 million reduction in employee compensation costs from the near General Fund through mandatory and voluntary furloughs, leave without pay, reduced work hours, voluntary retirements and separations, layoffs, and other methods. (SSB 6503 – 2010). The legislation acknowledged that State agency closures would result in temporary layoff (furlough) and reduction of compensation for affected state employees and directed that temporary layoffs and reduction in compensation not affect employee seniority, vacation and sick leave accrual, or retirement benefits.

In a special session in December of 2010, the Legislature passed HB 3225 (Appendix C), which added "temporary reduction in pay implemented prior to the effective date of this section" as another item to include in adjusting the calculation of final average salary for members whose retirement benefits may be adversely affected by the temporary economic conditions. However, like the previous bill (SB 6503) this change also only includes members employed by a state agency or institution which excludes most of the LEOFF Plan 2 membership.

2011 – State Employee and Local Government Provided Protection for 2011-2013

The 2011 Legislative Session addressed the problem of FAS protection only covering state employees by adding protection for local government employees as well in HB 2070 (Appendix D). The final bill report summarized that “Pensions from specified Washington retirement systems based on salaries earned during the 2011-13 biennium will not be reduced by compensation forgone by a member employed by either the state or local governments due to reduced work hours, mandatory leave without pay, temporary layoffs, or reductions to current pay if the measures are an integral part of a state or local government employer's expenditure reduction efforts.”

Lifetime Impact

The intent of FAS protection was so that state employees who helped during the period of economic difficulty wouldn't be punished for life for doing so. Taking a salary cut during their FAS period would affect their annual pension after retirement. People helping shouldn't take a lifetime reduction in pension as a result of a temporary budget issue.

Fiscal Year vs. Calendar Year Impacts

The State Legislature works on biennium while local governments work on a calendar year or annual basis. The FAS protections from the 2011-2013 biennium expired on July 1st, 2013. There may be a period from July through December 2013 where employees are subject to furloughs but do not have final average salary protection. Extending protection through the 2013-2015 biennium would be necessary to protect retiree employees' pension benefits.

POLICY OPTIONS

Option 1: Take No Action

The Board would take no further action and employees who are furloughed during their FAS period would continue to face reductions in their retirement.

Option 2: Introduce Legislation that Extends Protections

The Board would introduce a bill that would extend the FAS protections for employees described in HB 2070 into the 2013-2015 biennium.



Final Average Salary Protection

**Comprehensive Report
November 19, 2014**

Issue

- Members' retirement benefits will be reduced if "temporary salary reductions" after July 1, 2013 occur during their Final Average Salary (FAS) period

Background

- Furloughs are methods for handling a short-term economic or budget problem
- Creates the potential for a reduction in a member's pension benefit calculation if the salary reduction occurs during the FAS period

Background

- Series of Legislative actions between 2009-2013 that led to this issue
- HB 2070 created protections for all state and local government employees

Policy Options

- **Option 1: Take No Action**
 - The Board would take no further action and employees who are furloughed during their FAS period would continue to face reductions in their retirement
- **Option 2: Introduce Legislation that Extends Protections**
 - The Board would introduce a bill that would extend the FAS protections for employees described in HB 2070 into the 2013-2015 biennium



Any Questions?

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Career Extension

Report Type:

Comprehensive Report Follow-up

Date Presented:

11/19/2014

Presenter Name and Title:

Paul Neal, Sr. Research and Policy Manager

Summary:

Presentation of options for amending the 2013 Career Change bill (HB 2479) to balance the policies of:

- 1) Maintaining public confidence that LEOFF Plan 2 is well designed and professionally managed; and
- 2) Facilitating smaller jurisdictions' access to highly trained and experienced LEOFF Plan 2 retirees.

Strategic Linkage:

This item supports the following Strategic Priority Goals:

Enhance the benefits for the members., Maintain the financial integrity of the plan.

ATTACHMENTS:

Description	Type
<input type="checkbox"/> Career Extension Follow-up Report	Report
<input type="checkbox"/> Career Extension Follow-up Presentation	Presentation



November 19, 2014
Career Extension

COMPREHENSIVE REPORT FOLLOW-UP

By Paul Neal
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ISSUE STATEMENT

The LEOFF Plan 2 Board's (Board) 2014 proposal to tighten the career change law revealed tension between the policies of: 1) Maintaining public confidence that LEOFF Plan 2 is well designed and professionally managed; and 2) Facilitating smaller jurisdictions' access to highly trained and experienced LEOFF Plan 2 retirees.

OVERVIEW

Last year the Board learned some LEOFF Plan 2 retirees were using the 2005 career change law to work as law enforcement officers or fire fighters while drawing their pensions. Some employers facilitated this expansion of the law's original intent by redefining historically LEOFF positions to avoid LEOFF eligibility. Some felt this was inappropriate.

The Board proposed curtailing the ability of a LEOFF Plan 2 retiree to draw a pension and work in a historically LEOFF position. The Board's proposal was introduced in 2014 as HB 2479. The Legislative debate revealed tension between the Board's original policy goal and the goal of allowing smaller jurisdictions to compete for law enforcement officers and fire fighters they would not otherwise be able to afford.

At the September 24, 2014, meeting, the Board was briefed on this issue and directed staff to present options balancing the two policy goals.

MEMBERS IMPACTED

Two hundred sixty-five LEOFF Plan 2 retirees have utilized the provisions of the career change law since its inception in 2005¹. A similar number of members would be impacted by any changes to the law if those utilization numbers remain constant. Additionally, there are public trust issues addressed by the original bill that impact all LEOFF Plan 2 members.

BACKGROUND & POLICY ISSUES

Career Change

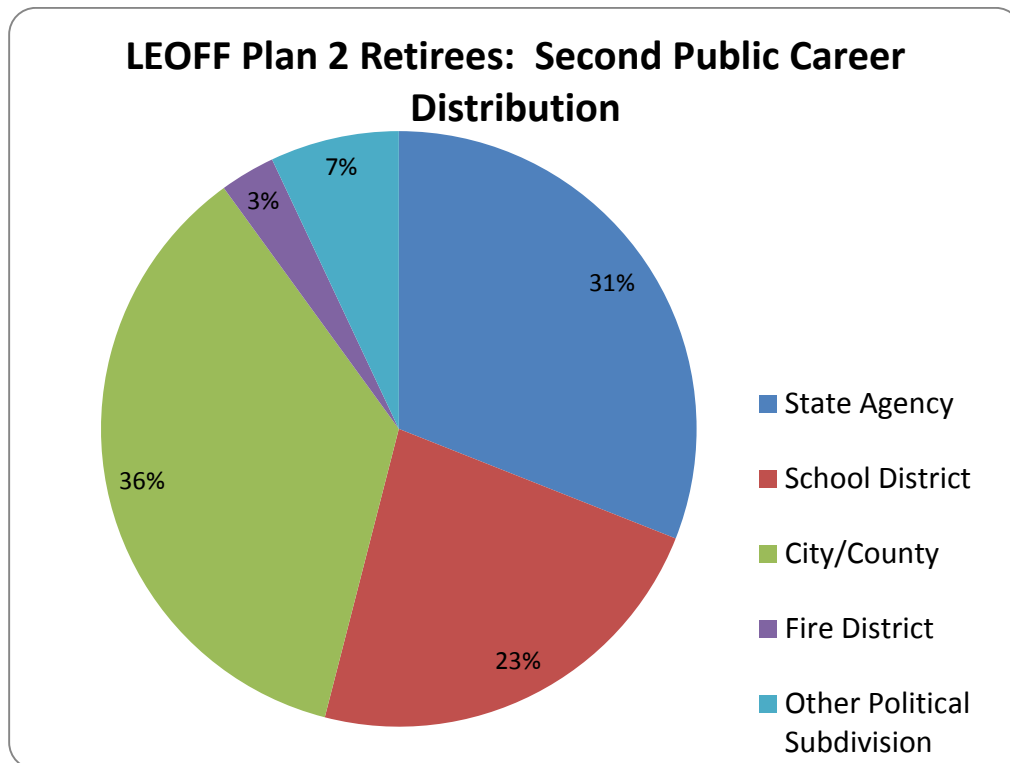
Before 2005 a LEOFF Plan 2 retiree's pension stopped if they worked in a job covered by any state-wide public retirement system. The Board recognized member's may no longer be able to fulfill the physical demands of law enforcement or fire fighting before they were ready, or could afford to stop working. The Legislature passed the Board's proposed Career Change legislation in 2005 enabling retired LEOFF Plan 2 retirees to start a second career in non-LEOFF public

¹ Data from November 2013 on career change usage from report produced by the Department of Retirement Systems (DRS).

employment. A retiree accepting such a job can either establish membership in another public system, thus suspending their LEOFF Plan 2 pension, or waive membership in the new system and continue receiving their pension.

The Board intended to facilitate transition from a physically demanding profession to a second less strenuous career. The Board did not contemplate enabling retirees to continue working as a law enforcement officer or fire fighter while receiving their pension.

The vast majority of participating retirees use Career Change as intended: to facilitate public employment as something other than a law enforcement officer or fire fighter. Recent DRS data shows 265 LEOFF Plan 2 retirees working in public employment with an average annual salary of \$28,268. Sixty-one percent work for non-LEOFF employers. Most of those retirees working for LEOFF employers do not work in historically LEOFF positions:



As discussed in more detail in the 2013 Career Change briefings, some employers seeking the benefit of the years of training and experience possessed by LEOFF Plan 2 retirees have redefined LEOFF positions as PERS positions. For instance, some employers have redefined full-time police chiefs and fire chief's positions as "part-time." This allows LEOFF Plan 2 to hold those positions without losing receipt of their pensions.

HB 2479

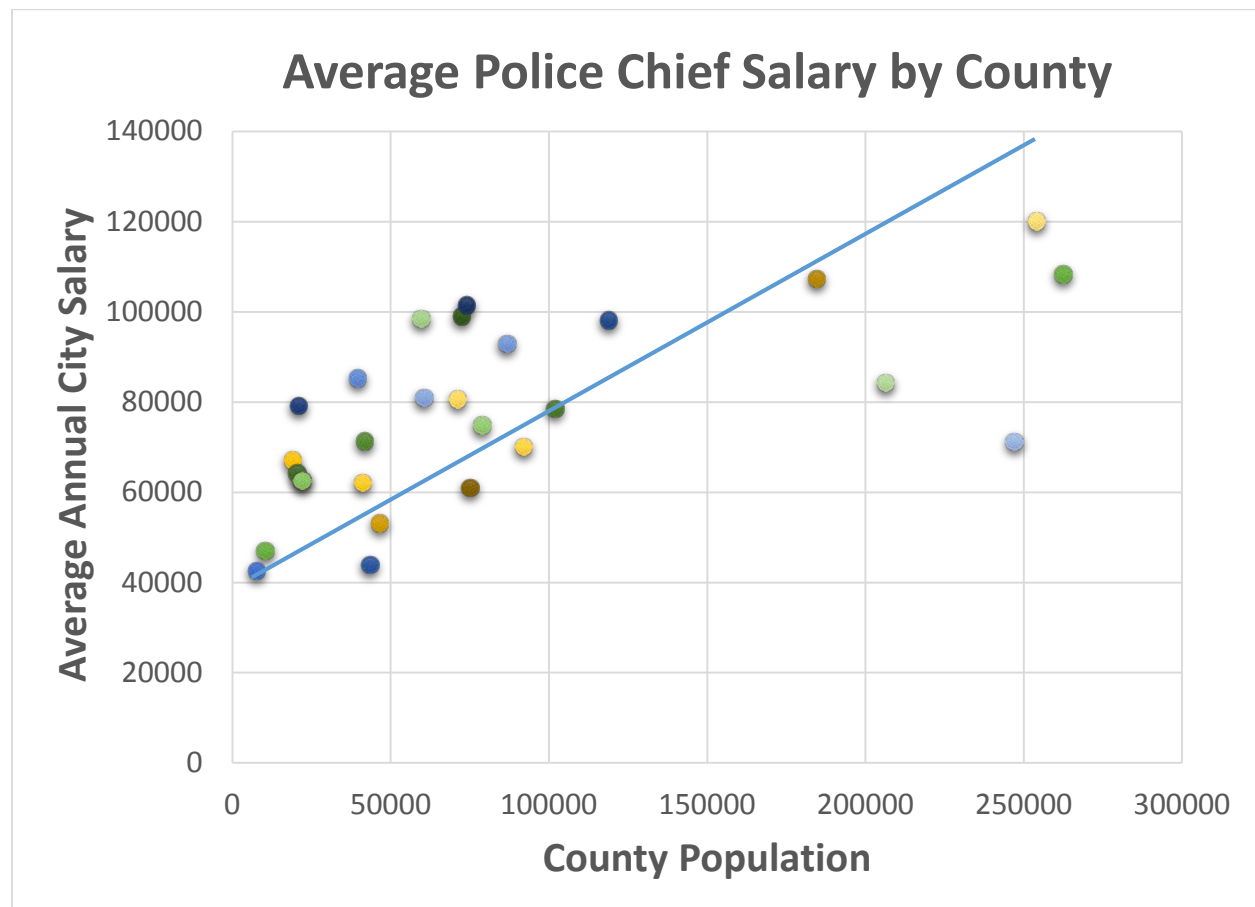
The Board proposed curtailing the ability of a LEOFF Plan 2 retiree to draw a pension and work in a historically LEOFF position. The proposal was introduced in 2014 as HB 2479. After passing the House, the bill failed to pass the Senate, in part because of concerns raised by stakeholder groups about the desirability of providing smaller jurisdictions access to highly trained and experienced fire chiefs and police chiefs they could not otherwise afford.

THE VALUE OF EXPERIENCE

Perhaps more than other public professions, law enforcement and fire fighting require continuous, specific training, such as the FBI academy for upper level law enforcement officers. Similarly, over the course of a 25 year career a fire fighter's employer spends approximately \$142,500 on training². Law enforcement employers also incur significant training costs. In addition to specific training, the years of field experience possessed by LEOFF Plan 2 retirees has great potential value to employers.

LEOFF employers are, by definition, mostly political subdivisions. Local government budgets, and hence public safety salaries, vary widely across Washington depending in large part on the tax base. Last year's career change analysis looked at chief salaries by employer population. While salary ranged significantly between many small jurisdictions and large jurisdictions, a better predictor of salary range was a city's location, i.e. urban vs. rural.

In an effort to sort the data to examine the urban vs rural distinction, last year's data is sorted below by population of the county the city is in, rather than the city itself.



² The South King County Fire Training Coalition, which provides training to fire fighters from 8 different jurisdictions, charges employee \$5700 per year per fire fighter. $\$5700 \times 25 \text{ years} = \$142,500$.

While there is not a one-to-one correspondence, the overall trend is that cities in counties with higher populations tend to pay higher salaries. This lends some support to the idea that allowing LEOFF Plan 2 retirees some ability to work while receiving their pensions could help lower paying jurisdictions compete for highly trained and experienced law enforcement officers and fire fighters.

IMPORTANCE OF A WELL DESIGNED AND PROFESSIONALLY MANAGED PLAN

Public perception of pension abuse can be exacerbated when benefits appear to flow disproportionately to highly placed employees. Public displeasure over perceived abuses undermines public confidence in the retirement system as a whole.

Uninterrupted Employment

If an employee appears to retire, then comes back to work in the same or similar position with their former employer, it raises questions whether the person ever actually retired. Both state retirement law and the Internal Revenue Code require a full separation from service before qualifying for a retirement allowance. These requirements exist to guard against pseudo-retirements, where a person goes through the process of retiring in order to qualify for their pension, but has only briefly, or in some cases never, left their employer.

Public Pension + Public Salary

Receiving both a public pension and a public salary at the same time is a common hot-button with the general public.

Newspaper articles have featured the total compensation received by LEOFF Plan 2 retirees who return to law enforcement officer or fire fighter employment. A recent Seattle Times report on LEOFF Plan 2 retirees working as police chiefs and fire chiefs described a LEOFF Plan 2 retiree working a fire chief collecting a \$100,000 a year pension and a \$90,000 a year salary. *See Appendix A.*

One could argue adding together pensions for previous service and the salaries earned for current service is mixing apples and oranges. LEOFF Plan 2 pensions, unlike salaries for current service, are not paid out of current revenues. LEOFF Plan 2 retiree pensions are fully funded at retirement by employer and employee contributions paid over the course of the employee's career, plus earnings on those contributions.

When a public employee retires and goes to work in the private sector, or even for a public entity in another state, few objections are heard. Some question why the result is different if that same public retiree goes to work in the public sector. Judging from the comments posted in response to recent newspaper articles, many members of the public do not find this analysis persuasive.

Perceived Favoritism

The vast majority of LEOFF Plan 2 retirees utilizing the career change law do not work as law enforcement officers or fire fighters and make less than in their first careers. For example, a retired police officer providing part-time security at a middle school. These are not the cases reported in the paper. Those articles often feature persons working in upper management

negotiating with the mayor and/or city council to create a position description allowing them to earn a salary as a law enforcement officer or fire fighter while drawing a LEOFF pension. Some of the public anger over allegations of abuse flow from a perceived misuse of authority.

BALANCING OPTIONS

The Board discussed the career extension issue at the September 24, 2014, meeting. Many members saw the value of allowing LEOFF Plan 2 retirees to share the value of their experience with smaller employers, but were uncomfortable with the current situation where position descriptions for LEOFF positions were modified to facilitate employment of LEOFF retirees.

The Board directed staff to develop options which maintain LEOFF Plan 2 as a well-designed and professionally managed plan while providing a “bright line” defining when a LEOFF Plan 2 retiree could work in a historically LEOFF position without suspension of their entire pension.

Make Benefit Generally Available

An issue with the current situation is the appearance of a “work around” where an employer takes specific action to accommodate a specific employee. This perceived dynamic appears where the employee continues with the same employer. It also appears when the benefit appears limited to persons with a motivated prospective employer.

These issues could be addressed by:

- Requiring the LEOFF Plan 2 retiree work for a different employer than they retired from;
- Openly provide the benefit so specific employer action would no longer be required. This could be done by:
 - Making the benefit available to a specific class of employees, i.e. chiefs; or
 - Making the benefit generally available to all LEOFF Plan 2 retirees.

Not Encouraging Earlier Retirement

Making the benefit generally available could incentivize employees to retire earlier in order to utilize the new standard. This could negatively impact the original employer and create an actuarial cost. The Actuary bases future costs in part by projecting when people will retire, i.e. how long they will draw a benefit. If the new standard creates enough incentive to retire earlier, this could have an actuarial cost.

A minimum service credit requirement would also ensure that persons eligible for this benefit were highly experienced employees.

This issue could be addressed by limiting the benefit to retirees with a set minimum of service credit. This could be 20 years or 25 years or some other number as directed by the Board.

Limiting Total of Pension Plus Salary

The public shows concern when a retiree’s total income, pension plus salary, appears excessive. Concern is especially likely if the combination doubles or nearly doubles the person’s compensation. While the objection is debatable, it is clearly an area of public concern.

This issue could be addressed by limiting the combined amount of a LEOFF Plan 2 retiree’s salary and pension. Options include:

- Limiting total compensation to a percentage of Final Average Salary: Limiting total pension and salary to a set percentage of Final Average Salary (FAS) would ensure that the retiree's total compensation would be similar to what he or she earned prior to retirement. This could address perceptions of abuse. On the other hand, requiring DRS to develop and track a new, LEOFF Plan 2 specific, post-retirement employment standard could generate an administrative cost.
- Limit the Timeframe for Collecting Both Pension and Salary. The State's other Plan 2 systems allow retirees to work in a system-covered position for up to 867 hours per year (approximately 5 months). Once a retiree reaches that point, their pension stops for the remainder of the calendar year. It restarts at the beginning of the next year, stopping again if the retiree works another 867 hours. DRS has systems and reporting requirements in place to track the 867 hour rule for the State's other Plan 2 systems.

Adopting this same standard for LEOFF plan 2 retirees working in historically LEOFF positions would effectively limit the combined salary and pension, thus mitigating the "double-dipping" issue. It would be consistent with current policy in the State's other plan 2 systems. Finally, it would be administratively easier for DRS than administering a new standard.

NEXT STEPS

Possible options for further Board action include:

1. Support reintroduction and passage of HB 2479
2. Reconcile the policies discussed above by proposing legislation that would amend HB 2479 by:
 - a) Retaining prohibition on avoiding LEOFF membership by modifying positions; and
 - b) Allowing LEOFF Plan 2 retirees to work in LEOFF positions under specified circumstances. The table below summarizes the options discussed above:

Conditions for LEOFF 2 retiree to work in LEOFF position	Yes	No
Require change of employer	<input type="checkbox"/>	<input type="checkbox"/>
Limit to Chief positions	<input type="checkbox"/>	<input type="checkbox"/>
Require 25 or more years service credit	<input type="checkbox"/>	<input type="checkbox"/>
Limit combined pension + salary to percentage of FAS	<input type="checkbox"/>	<input type="checkbox"/>
Limit pension eligibility to 867 hours per year	<input type="checkbox"/>	<input type="checkbox"/>

3. Take no further action on this issue

APPENDIX A

Seattle Times Article: *Fire, police officials get retire-rehire deals*

Published in Seattle Times:

Updated: 8:25 a.m. Thursday, Nov. 21, 2013 | Posted: 8:25 a.m. Thursday, Nov. 21, 2013

Fire, police officials get retire-rehire deals

By MIKE BAKER

The Associated Press

SEATTLE —

A couple years after retiring as Lakewood fire chief at age 58, Paul Webb returned to the profession and his former job title — this time at Orting Valley Fire and Rescue.

Hired under a contract without some of the typical employee benefits, Webb's arrangement at the end of 2009 allowed him to draw more than \$100,000 in annual pension payments while also earning up to \$90,000 in yearly pay. It was an interim position, according to his contracts. He stayed in the job for three years.

It wasn't long before six of Webb's past colleagues followed similar paths, retiring and taking jobs in various contract positions, according to records.

In recent years, Washington lawmakers changed laws to crack down on retire-rehire arrangements, seeking to prevent pensioners from double-dipping when they return to similar government jobs.

But The Associated Press found that gaps in the special rules created for law enforcement officers and firefighters have allowed them to draw salaries alongside their pension. And those retirees generally retire much younger and with much larger retirement plans than teachers or other government workers.

According to local and state records obtained by AP under public records law, dozens of public safety retirees around the state became contractors. Some took part-time jobs such as polygraph consultants or pilots or instructors, while others returned to prominent managerial positions.

Other retirees in those two retirement systems reserved for law enforcement officers and firefighters — called LEOFF-1 and LEOFF-2 — took jobs that had them work slightly less than full time or with slightly less benefits, also allowing them to bypass rules that would have halted pension payments.

Local governments gain from the arrangements because officials can hire someone with experience at either a discounted pay rate or without having to cover some typical benefits.

DuPont Mayor Michael Grayum recently worked closely with the Department of Retirement Systems to ensure the city was following the rules in the hiring of a police chief who had

retired from a different department. The city didn't seek out pensioners, but three of the top candidates for the job were retirees.

"We were able to hire more experienced leadership for a lower cost than we have historically," he said. The new chief is able to keep his pension because his job is only 35 hours a week instead of 40.

The Legislature established retire-rehire rules for many government workers in 2003 due to concerns about the frequency and cost of those arrangements. In 2011, lawmakers placed even tighter controls on those deals, closing what some political leaders derided as "loopholes."

Rules for members of the newer LEOFF system were established in 2005 with the intent of preventing retire-rehire arrangements in similar jobs but designed to allow transition to less-demanding occupations in government.

Steve Nelsen, executive director of the LEOFF-2 Retirement Board, said the rules weren't meant to allow retirees to return to work in similar LEOFF jobs. "This was not the intent of the bill," Nelsen said. He said several board members have expressed concern about the DuPont case that surfaced in the wake of a previous AP story and that the board is now exploring the issue.

LEOFF rehire rules revolve around the issue of eligibility. Workers are eligible for the LEOFF system if they are fully compensated in full-time positions as a law enforcement officer, firefighter or supervisor. A retiree who gets rehired into a similar LEOFF-eligible position would have their pensions benefits halted.

But if a LEOFF retiree returns to a position that's less than full-time or not fully compensated, they technically would not qualify for the system and can avoid disruption of their benefits, according to the state.

Some have seized on that potential.

— In Maple Valley, in King County, Larry Rude was hired in 2007 to a contract position as assistant fire chief. He started in the new position the same day he retired from the state system, according to records.

For three years, Rude earned more than \$100,000 a year in salary — plus other benefits — along with a similar amount in retirement payments. Rude said he was allowed to draw pension and salary because he was only working in a part-time position, saying it "wasn't very many" hours a week.

Rude said he didn't have a specific number of hours that he typically worked, although the final contract he signed said Rude could work up to 159 hours a month — an average of about 37 hours a week.

— In Soap Lake, in central Washington, officials chose Glenn Quantz as an interim police chief last year, bringing him on as a contractor. Quantz had retired in 2009 at age 53 from the Thurston County Sheriff's Office.

Mayor Raymond Gravelle told state officials in a letter obtained by AP that Quantz was working 32 hours a week — making it a part-time job that wouldn't disrupt his benefits. However, Quantz is earning the full salary of the police chief and the same amount as the previous chief, according to records provided by the city's finance director.

Quantz declined to comment about his situation. Gravelle said the city is small enough that Quantz doesn't need to work full-time, but he said officials will be going back to review records to ensure they are compliant.

— In the Orting Valley case, documents show Webb consulted with the state about his rehire transition because he didn't want it to disrupt his retirement benefits. While Webb was working in a full-time post, a state official told him that there would be no impact because he didn't qualify for sick leave cash-outs and some other benefits.

"It was definitely full-time, but it wasn't fully compensated," Webb said in an interview.

Dave Nelsen, the legal and legislative services manager at the Department of Retirement Systems, said it's not clear what the review entailed at the time but said the issue of what qualifies as "fully compensated" is subjective and could be interpreted differently by other officials.

— At North Highline Fire District in the Seattle area, Steve Marstrom was hired to a contract as the administrative chief. Marstrom had retired from the Lakewood Fire District more than a decade before at age 50.

Marstrom's contract said he did not have set hours but would be paid \$8,000 a month. He could also get \$1,500 a month for housing. Marstrom said his role at North Highline was strictly an administrative one, since he was supervising personnel and not participating in any firefighting activities.

Because he wasn't personally involved in firefighting, Marstrom said the role didn't qualify for the LEOFF system so it wouldn't disrupt his LEOFF benefits.

Other LEOFF retirees in the system managed to get hired in similar roles that are technically in other pension systems. Some fire officials transitioned to become fire inspector or deputy fire marshal. Police officials transitioned to work as a "violence prevention" leader or agency security manager.

Depending on the circumstances, state officials could decide that workers hired as contractors should have been reported to the state as actual employees, potentially leading to a halting of pension payments. By hiring as contractors, however, the employees are more difficult for state pension managers to track.

One worker in the larger group of Lakewood retirees who became contractors had a part-time salary of \$90 per hour, while another was hired back as the department's full-time "emergency preparedness coordinator." Nelsen, the retirement system manager, said the agency was further examining the cases of Rude, Marstrom and Webb.

Earlier this year, after an AP report that described the case of former Lakewood official Greg Hull as part of a larger story about how some workers boosted their pensions with pre-retirement raises, the state audited files related to Hull and determined that he had been improperly classified as a contractor in his newer job at DuPont.

Retirement system managers are now seeking to recover more than \$550,000 in excess pension payments from that city.

Retirees in the two systems dedicated for law enforcement officers and firefighters have different rules than most other retirees. Many retired teachers, for example, would be unable to work more than 867 hours a year in a government job without having their benefits disrupted, but law enforcement and firefighter retirees could conceivably work more than 1,800 hours a year.

Law enforcement and firefighters also get more leeway even though their pay and benefits are typically much greater than other government workers. The median worker who retired over the last 10 years into a LEOFF system currently gets about \$45,000 per year in pension payments. By comparison, the median retiree into the teacher pension systems has a benefit about half that size — \$24,000.

Despite the much larger pension values, the median LEOFF retiree departed the job at age 56 while the median teacher retiree worked until age 61.

AP Writer Mike Baker can be reached on Facebook: <http://on.fb.me/HiPpEV>
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Career Extension

Comprehensive Follow-up
November 19, 2014

Issue Overview

Follow-up on the September 2014 career extension presentation.

Board directed staff to develop options balancing:

- Maintaining public confidence that LEOFF Plan 2 is well designed and professionally managed; and
- Facilitating smaller jurisdictions' access to highly trained and experienced LEOFF Plan 2 retirees.

2014 Board Proposal - HB 2479

Prevent retirees from drawing a pension while in a historically LEOFF position even if the position:

- Is less than full time;
- Is less than fully compensated;
- Is not fully commissioned;
- Includes additional non-LEOFF duties; or
- Is filled by an independent contractor.

Board Direction

Provide options for a “bright line” of what is allowed and not allowed:

- Close loopholes by reintroducing HB 2479; plus
- Specify when a LEOFF 2 retiree could fill a LEOFF position without losing pension.

Balancing Issues

Issues

- Perception of unequal access to opportunity.
- Cutting short original career to draw pension + salary.
- Combined pension and salary “doubles” income.

Possible Balance:

- Employment must be with different employer.
- Specify covered positions – i.e. chiefs; or make available to all
- Require retiree to have earned at least 25 years of LEOFF plan 2 service credit.
- Limit pension to mitigate combined compensation:
 - Total compensation cannot exceed 120% of FAS;
 - 867 hour limit.
 - ≈ 5 months
 - PERS standard

Next Steps

1. Maintain original position – support reintroduction and passage of HB 2479
2. Redraft HB 2479 to allow LEOFF Plan 2 retiree to hold a LEOFF position without losing pension in defined circumstances:

Conditions for LEOFF 2 Retiree to Work in LEOFF position	Yes	No
Require change of employer	<input type="checkbox"/>	<input type="checkbox"/>
Limit to Chief positions	<input type="checkbox"/>	<input type="checkbox"/>
Require 25 or more years service credit	<input type="checkbox"/>	<input type="checkbox"/>
Limit combined pension + salary to percentage of FAS	<input type="checkbox"/>	<input type="checkbox"/>
Limit pension eligibility to 867 hours per year	<input type="checkbox"/>	<input type="checkbox"/>

3. Take no further action

Questions?

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Remarriage Prohibition

Report Type:

Comprehensive Report Follow-up

Date Presented:

11/19/2014

Presenter Name and Title:

Tammy Harman, Death & Disability Ombudsman

Ryan Frost, Research Analyst

Summary:

None of the current Washington state administered retirement plans contain a prohibition on remarriage for a survivor receiving pension benefits. If a survivor remarries, their survivor pension benefits continue. However, Workers' Compensation benefits provided by the Department of Labor and Industries (LNI) to a survivor of a line of duty death can cease if the survivor remarries.

Strategic Linkage:

This item supports the following Strategic Priority Goals:
Enhance the benefits for the members.

ATTACHMENTS:

Description	Type
 111914.5 RemarriageProhibition CompFollowup	Report
 111914.5 RemarriageProhibition CompFollowup	Presentation



November 19, 2014
Remarriage Prohibition

COMPREHENSIVE REPORT FOLLOW-UP

By Tammy Harman
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ISSUE

A policy inconsistency exists between Workers' Compensation benefits and retirement benefits.

A survivor who remarries will continue to receive retirement benefits but may lose Workers' Compensation benefits.

OVERVIEW

None of the current Washington state administered retirement plans contain a prohibition on remarriage for a survivor receiving pension benefits. If a survivor remarries, their survivor pension benefits continue. However, Workers' Compensation benefits provided by the Department of Labor and Industries (LNI) to a survivor of a line of duty death can cease if the survivor remarries.

The Legislature has twice considered bills (HB 1545 in 2007 and 2008 introduced by Representative Steve Kirby, and HB 1212 in 2009 by the LEOFF Plan 2 Board) addressing the policy of terminating worker's compensation death benefits when the surviving spouse of certain public safety employees remarries. Neither bill passed. In the interim of 2009, several Legislative members requested LNI study the issue and to report back.

Also in the interim of 2009, the Board conducted a nationwide search in 2009 and found four states without remarriage prohibition on Worker's Compensation benefits. In fact, for one of those states there was a specific exemption for law enforcement officers and fire fighters.

In 2010, the Board introduced SB 6407 which provided several duty-related death benefits to LEOFF 2 members, including the elimination of the remarriage prohibition of Worker's Compensation benefits. It was overwhelmingly passed in the House, but the provision containing the elimination of remarriage prohibition was removed by the Senate before passing. No action has been taken by the Board since.

Administratively, removing the prohibition from LNI statutes could assist the agency, as there has been challenges tracking survivor remarriages, resulting in overpayments.

At the September 24, 2012 Board meeting, a survivor of a law enforcement officer killed in the line of duty came to the Board and asked it to consider another attempt at passing a bill. At that time, the Board asked the staff to provide this follow-up.

BACKGROUND & POLICY ISSUES

Unlike retirement benefits, surviving spouses who are receiving Workers' Compensation death benefits cannot continue to receive the benefit after remarriage. The LEOFF Plan 2 Retirement Board has been contacted by survivors of members killed in the line duty regarding this policy.

Retirement Benefits for Survivors

If a member dies in the line of duty and has 10 or more years of service credit or is eligible to retire, the surviving spouse may choose between the following two benefits:

1. A lump sum payment of 150 percent of the member's accumulated contributions, or
2. A monthly benefit calculated as if the member had elected the Joint and 100% Survivor Option.

If the survivor elects the continuing benefit, the survivor will continue to receive the benefit for their lifetime; the benefit is actuarially reduced to reflect the cost of providing the benefit over the survivor's lifetime.

If a survivor remarries, it has no impact on the survivor's receipt of retirement benefits. Since inception, LEOFF Plan 2 has not contained any provisions with a prohibition on remarriage for survivors.

LEOFF Plan 1 at one point contained a prohibition on remarriage, that provision was removed from the plan by the Legislature in 1977. In 2002, a provision was added to LEOFF Plan 1 to make the 1977 legislation retroactive, allowing pre-1977 survivors to remarry and continue receiving survivor retirement benefits.

Workers' Compensation Benefits for Survivors

If a worker dies from a work-related injury or occupational disease, a surviving spouse receives a monthly benefit from Workers' Compensation. The amount of 60% of the worker's monthly wages at the time of death. No actuarial reductions are applied to this survivor benefit.

If the disabled worker dies and the death is related to their disabling work-related injury or occupational disease, the amount the survivor receives is also 60% of the worker's wages, but from the time of disablement. No actuarial reductions are applied to this survivor benefit.

If a surviving spouse in either case remarries, monthly benefit payments stops at the end of the month in which they remarry.

At the time of remarriage, survivors have two options:

1. Receive a final settlement and receive no further benefits under the claim.
2. Leave the settlement in trust with Workers' Compensation.
 - a. If the new marriage ends in death, annulment or divorce, the survivor can apply to reinstate the benefit as of the date of death or date the divorce becomes final.
 - b. Should the survivor die while the settlement is in trust, the survivor's estate is paid 50 percent of the remaining pension reserve or the settlement amount, whichever is less.

If the death is not related to the claim and a survivor option was selected, monthly survivor benefit payments do not stop. Similar to survivor retirement benefits, the worker's benefit was actuarially reduced to reflect the cost of continuing the benefit over the survivor's lifetime.

Legislative History

The Legislature has twice considered bills (HB 1545 – 2007-08, HB 1212 – 2009) addressing the policy of terminating worker's compensation death benefits when the surviving spouse of certain public safety employees remarries.

2007-08 Legislative Session. Legislation first introduced during the 2007 Legislative Session by Representative Steve Kirby would have allowed surviving spouses of LEOFF Plan 2 members, who are receiving Workers' Compensation death benefits, to continue to receive the benefit after remarriage. The 2007 bill did not receive a hearing. During the 2008 session, the bill was passed unanimously by the House of Representatives, but the bill did not move past the Senate Rules Committee. A Fiscal Note from the Department of Labor and Industries estimated the cost of the bill at \$201,662 in the 2007-09 biennium and \$21,536 in each of the 2009-11 and 2011-13 biennia.

2009 Legislative Session. New legislation was introduced in the 2009 session allowing the continuation of workers' compensation benefits after remarriage for surviving spouses of LEOFF Plan 2 members and Washington State Patrol Retirement System members who died in the course of employment or whose death is due to an occupational disease.

The bill passed the House of Representatives, but was amended in the Senate before being passed. The amendment requires the Workers' Compensation Advisory Committee to study issues relating to allowing a surviving spouse to continue to receive industrial insurance death benefits after remarriage. The amended bill was sent to Conference Committee, but did not proceed any further. The bill was returned to the House of Representatives for consideration during the 2010 session.

2009 Interim. Following the 2009 Legislative Session, Representative Steve Conway, Chair of the House Commerce and Labor Committee and Senator Jeanne Kohl-Welles, Chair of the Senate Labor, Commerce, and Consumer Protection Committee, sent a joint letter to Judy Schurke, Director of Labor and Industries requesting a study on the policy of terminating survivors' benefits upon remarriage. LNI's response can be found as Appendix A.

2010 Legislative Session. Legislation, which targeted taking care of the families of law enforcement officers' killed in line of duty during late 2009 and early 2010, was introduced during the 2010 session. This bill provides a comprehensive package of benefits to augment the existing duty-related death benefits.

As introduced, this legislation included a provision which would have eliminated the remarriage prohibition for workers' compensation benefits on surviving spouses of public safety employees killed in the course of employment. Surviving spouses who have already had their benefits suspended due to remarriage would have their benefits resume.

The legislation, as introduced, passed overwhelmingly out of the House of Representatives. However, a Senate amendment removed the remarriage prohibition provision of the bill. In place of the prohibition, the Senate increased the potential lump-sum payout a survivor could choose to take in the case of remarriage¹. Ultimately, the House concurred with the Senate amendment and passed the legislation without the remarriage prohibition.

¹ The surviving spouse may receive a lump sum of thirty-six times (increased from twenty-four times) the monthly compensation rate in effect on the date of remarriage allocable to the spouse for himself or herself or fifty percent of the remaining annuity value of his or her pension, whichever is the lesser. HB 2519 (2010), Sec 3.

Administrative Issues

The requirement to determine eligibility for continuing benefits has created administrative challenges for the Department of Labor and Industries. In fact, the Department of Labor and Industries received an audit finding from the State Auditor's Office in 2006² for paying benefits to survivors who were no longer eligible due to remarriage. Eliminating this requirement may help the Department of Labor and Industries.

Policy Treatment in Other States

Preliminary research by the LEOFF Plan 2 Retirement Board has identified at least four states that do not stop survivor benefits upon remarriage. Those states include: Kansas, Minnesota, Nevada, and North Dakota. In the case of Nevada, the continuation of benefits after remarriage is an exception for surviving spouses of police officers or firefighters. See Appendix A.

POLICY OPTIONS

Option 1: Take no further action.

Option 2: Direct staff to provide updated information and a bill draft in a final proposal.

SUPPORTING INFORMATION

Appendix A: Response Letter from Labor and Industries to the Legislature (2009)

Appendix B: States Allowing Continuation of Benefits after Survivor Remarriage (2009)

² WA State Auditor's Office, Audit Report 6541, Released May 5, 2006

Appendix A

Report on the Continuation vs. Termination of Death Benefit Pensions Upon Remarriage In Washington's Workers' Compensation System

Issue

The Department has been asked to make recommendations as to whether monthly death benefit pension payments should be continued for surviving spouses of all workers who remarry.

Background

Statutory amendments were considered in the last two legislative sessions (HB1545 in 2008 and HB1212 in 2009) which would direct the continued payment of death benefit pensions to surviving spouses of certain public safety employees who are members of the Law Enforcement Officers and Firefighters (LEOFF) for life, excluding them from the remarriage termination provision.

The law currently provides that the surviving spouse of any fatally injured worker who remarries can choose to receive a one-time payment equal to 24 months of death benefit pension payments, or can have their death benefit pension suspended for reinstatement at a later date should their remarriage end. Death benefit pension payments continue for any eligible dependent child(ren) upon remarriage of the surviving spouse.

History

RCW 51.32.050 is the statute governing death benefits within the industrial insurance laws. This law was enacted in 1911 as part of the original legislation establishing workers' compensation in the State of Washington. This earliest version provided a monthly death benefit pension of \$20.00 to widows and invalid widowers of workers fatally injured on the job.

Payments were directed to be made throughout the life of the surviving spouse ceasing at the end of the month in which remarriage occurred. The one-time payment available upon remarriage (remarriage settlement) was only for widows. The law stated that “. . . she shall receive, once and for all, a lump sum equal to twelve times her monthly allowance, viz.: the sum of \$240.00, but the monthly payment for the child or children shall continue as before”.

Applicable Amendments

The death benefit statute has been amended many times since 1911. Only those amendments applicable to the recipients of death benefit pensions and the remarriage termination provision will be discussed in this writing.

Session laws from 1941 increased the monthly death benefit payment to a widow or invalid widower to fifty dollars and changed the remarriage settlement for widows from a sum equal to twelve times the monthly allowance to a lump sum of \$1000.00. In the 1957 legislative session the monthly death benefit was raised to \$125.00 with the widows'

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remarriage settlement amount increased to a lump sum of \$1500.00. Another increase in these benefits was implemented in 1965 bringing the monthly death benefit to \$140.00 with a remarriage settlement for widows of \$2000.00.

Amendments in 1971 brought a change in the compensation scheme for industrial insurance benefits. Benefit amounts were changed from a flat monthly amount to a percentage of the worker's wage based upon marital status and number of children, with minimum and maximum benefit levels established. Where a widow or invalid widower with no children would have previously received \$140.00 per month, the benefit was changed to 60% of the wages of the deceased workman but not less than \$185.00. Monthly benefits were not to exceed 75% of the average monthly wage of the state. A remarriage settlement for a widow was increased to a lump sum of \$7500.00 or 50% of the then remaining annuity value of her pension, whichever was lesser.

The statute was again amended in 1975 to give surviving spouses that remarried a choice of taking the one-time remarriage settlement or suspending their benefits for reinstatement in the future should the remarriage end. In 1991 the remarriage settlement amount was increased to 24 times the monthly death benefit pension payment.

Equal Rights Amendment

Constitutional amendments were enacted in 1973 to conform many of the state's statutes to the principles of equal rights between the sexes. The equal rights amendment (ERA) establishes as a principle of constitutional law the inherent equality of males and females. It requires, therefore, that men and woman be treated identically in terms of their legal rights and responsibilities.

Law Review

In assessing the problems with implementation of the ERA, Professor Linda Dybwad wrote, "These changes seek to equalize treatment of spouses by extending to the wife many rights formerly available only to the husband, as well as extending to husbands some benefits previously reserved only to wives. The wife is also now subject to several duties formerly imposed only on the husband."¹

The industrial insurance laws were included in the 1973 amendments implementing the ERA. Previously, some laws extended benefits to women, but not to their male counterparts, on the theory that women were the only sex in need of support or protection. This was seen in the original drafting of RCW 51.32.050 in 1911, which provided death benefits to the *widow or invalid widower* of a fatally injured worker.

Professor Dybwad stated that the "Disparity in treatment of widows and widowers under prior statutes was common. This disparity reflected two underlying assumptions: (1) That a widow is usually dependent on the deceased for support; and (2) that survivor's benefits should be available only where dependency exists. The first assumption, although still

¹ Washington Law Review Volume 49, Number 2, February 1974, University of Washington School of Law, Implementing Washington's ERA: Problems with Wholesale Legislative Revision by Professor Linda Dybwad

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valid as a general proposition, is not always the case, and in the years to come, as increasing numbers of women enter and remain in various occupations, will become less valid. The second assumption, interestingly enough, appears to have been discarded by the drafters of Chapter 154² who have uniformly extended survivor's benefits to spouses regardless of dependency.

This extension, of course, is not the only way to conform survivor's benefits to the equal rights amendment. The available alternative is restriction of benefits to surviving spouses, regardless of sex, who were dependent on the deceased for support. The legislative decision should be made after consideration of several factors, including the cost to employers to provide benefits to nondependent survivors and the economic impact on married persons. Generally speaking, pensions do not provide living income to retired individuals. The sudden loss of one pension, even if his or her own pension remains, could be a severe economic blow to the surviving spouse. On the other hand, removal of a dependency test converts the pension into a form of property similar to other property that may be inherited as a matter of right, regardless of need.”

No actual bill file could be found that documents the reasoning or intent of the original language in RCW 51.32.050 from 1911 or for early amendments. Given the year in which the industrial insurance laws were established, it is known that the workforce was predominantly male. Death benefits were provided to a fatally injured worker's widow or invalid widower. If an able-bodied husband lost his wife in an industrial fatality, there were no provisions to provide him with a death benefit pension. The assumptions discussed by Professor Dybwad appear to be embodied in the initial draft of the death benefit statute. It is not believed that death benefit pensions were adjudicated with a dependency test. Rather, wives were assumed to be dependent upon their husbands and invalid husbands assumed to be dependent upon their wives due to their condition.

With the 1973 ERA, the statute was rewritten substituting “surviving spouse” for “widow”. In doing so, as Professor Dybwad noted, the assumption that survivor's benefits should be available only where dependency exists was essentially eliminated.

Current Statutory Language

The sections of RCW 51.32.050 applicable to this discussion currently state:

(2)(a) Where death results from the injury, a surviving spouse of a deceased worker eligible for benefits under this title shall receive monthly for life or until remarriage payments according to the following schedule: . . .

(c) Payments to the surviving spouse of the deceased worker shall cease at the end of the month in which remarriage occurs: . . .

(f) Upon remarriage of a surviving spouse the monthly payments for the child or children shall continue as provided in this section, but the monthly payments to such surviving

² Chapter 154 refers to the Washington Session Laws of the 1973 First Extraordinary Session implementing the constitutional amendments to enact the Equal Rights Amendment

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spouse shall cease at the end of the month during which remarriage occurs. However, after September 8, 1975, an otherwise eligible surviving spouse of a worker who died at any time prior to or after September 8, 1975, shall have an option of:

(i) Receiving, once and for all, a lump sum of twenty-four times the monthly compensation rate in effect on the date of remarriage allocable to the spouse for himself or herself pursuant to subsection (2)(a)(i) of this section and subject to any modifications specified under subsection (2)(d) of this section and RCW 51.32.075(3) or fifty percent of the then remaining annuity value of his or her pension, whichever is the lesser:

PROVIDED, That if the injury occurred prior to July 18, 1991, the remarriage benefit lump sum available shall be as provided in the remarriage benefit schedules then in effect; or

(ii) If a surviving spouse does not choose the option specified in subsection (2)(f)(i) of this section to accept the lump sum payment, the remarriage of the surviving spouse of a worker shall not bar him or her from claiming the lump sum payment authorized in subsection (2)(f)(i) of this section during the life of the remarriage, or shall not prevent subsequent monthly payments to him or to her if the remarriage has been terminated by death or has been dissolved or annulled by valid court decree provided he or she has not previously accepted the lump sum payment.

(g) If the surviving spouse during the remarriage should die without having previously received the lump sum payment provided in subsection (2)(f)(i) of this section, his or her estate shall be entitled to receive the sum specified under subsection (2)(f)(i) of this section or fifty percent of the then remaining annuity value of his or her pension whichever is the lesser.

(h) The effective date of resumption of payments under subsection (2)(f)(ii) of this section to a surviving spouse based upon termination of a remarriage by death, annulment, or dissolution shall be the date of death or the date the judicial decree of annulment or dissolution becomes final and when application for the payments has been received. . . .

(6) For claims filed prior to July 1, 1986, if the injured worker dies during the period of permanent total disability, whatever the cause of death, leaving a surviving spouse, or child, or children, the surviving spouse or child or children shall receive benefits as if death resulted from the injury as provided in subsections (2) through (4) of this section. Upon remarriage or death of such surviving spouse, the payments to such child or children shall be made as provided in subsection (2) of this section when the surviving spouse of a deceased worker remarries.

Retirement Pension vs. Workers' Compensation Pension

There is a distinct difference between a retirement pension and a pension granted under workers' compensation. A worker must be vested in their retirement plan in accordance with the plan's requirements prior to being eligible to receive retirement benefits.

Typically this requires an accrual of years of employment in a specific retirement plan or

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industry. Under workers' compensation, a worker in covered employment is eligible for benefits even if they sustain an injury on their first day of employment.

Consistent Application

The industrial insurance laws currently provide consistent eligibility for benefits. Benefits are granted to a surviving spouse on the basis of assumed dependency through marriage with the worker, and those death benefits are terminated upon remarriage, based on an assumed dependency on the new spouse.

Applicable Recipients

The remarriage termination with lump sum award, or suspension of death benefit pension payments, only applies to surviving spouses of workers that die as a result of an accepted industrial injury or disease (fatality) or surviving spouses of workers that were awarded total permanent disability pensions³ before the legislature adopted the pension options in 1986.

Current Data

Using data through September 2009, the number of surviving spouses currently receiving death benefit pensions (fatalities) or pre-option total permanent disability pensions is:

Department of Energy	State Funded	Self Insured	Total
35	4,452	564	5,051

The numbers of such surviving spouses that have remarried are presented in the table below, listed by year of remarriage:

Year	No Liability Listed	Department of Energy	State Funded	Self Insured	Total
1945			1		1
1946			1		1
1966			1		1
1972			1		1
Year	No Liability Listed	Department of Energy	State Funded	Self Insured	Total
1975			1		1
1976			6	1	7

³ If a worker is awarded a total permanent disability pension on a claim that was received in the Department on or after July 1, 1986, it is classified as an "option pension". The worker selects one of three options that determines the amount of the current monthly pension benefit as well as if benefits will continue to be paid to a nominated beneficiary upon the worker's death. If providing for a beneficiary, the worker's benefit is reduced. Because the worker has taken a reduced benefit to provide for a beneficiary, the remarriage termination provision does not apply. The option choice only applies if the worker's death is unrelated to the accepted injury or disease. If the worker's death is related to the accepted injury or disease, it is classified as a "fatality". "Pre-option" total permanent disability pensions are total permanent partial disability pensions awarded to the worker on claims received prior to July 1, 1986.

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1977	1		11		12
1978			12	3	16
1979	1		24	2	28
1980	1		18	2	21
1981			15	1	16
1982			13	3	16
1983			16	3	19
1984			11		11
1985			12		12
1986			17	1	18
1987	1		19	1	21
1988			12	1	13
1989			15		15
1990			10	1	11
1991			15	2	17
1992			11	1	12
1993			9	3	12
1994			11	1	12
1995			10		10
1996		1	9		10
1997		1	10	1	12
1998			13	4	17
1999	1		8	2	11
2000			8	1	9
2001			5	3	8
2002			7	1	8
2003			5	1	6
2004			6	1	7
2005			7	1	8
2006			7		7
2007			4	2	6
2008		1	6	3	10
2009*		1	3	1	5

*Not a full year

Future Assumptions

In considering the potential benefit and rate impacts of modifying the remarriage termination provision, it was necessary to make some assumptions. This was done in consultation with the department's actuarial staff.

In projecting the number of new surviving spouse recipients, the number of fatalities (related deaths compared to the number of new time-loss claims) for the last several years was reviewed. The actuaries advised there have been about 60 fatal pensions allowed per year over the past four years. With the inclusion of domestic partners, this figure is

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estimated to increase approximately one percent, thereby resulting in a projected average of 61 future fatal pensions per year.

The actuaries currently have projections of remarriages, as a remarriage forecast is built into the pension table. The table assumes a probability of remarriage of about 2.5% annually at age 20 reducing to 1.5% annually at age 40 and declining rapidly after that. This means that for 100 surviving spouses at age 20, one can expect 2 ½ remarriages per year; for 100 surviving spouses at age 40, one can expect 1 ½ remarriages per year.

Benefit/Rate Impacts for Surviving spouses of LEOFF workers

Based upon the actuaries' calculations, the termination of the remarriage provision for surviving spouses of LEOFF workers would result in costs to the accident fund of:

\$292,023 one-time cost increase on existing state fund pensions

\$ 63,757 cost for future fatal pensions on existing injuries

\$355,780 total cost to the accident fund, and a

\$124,476 one-time cost to self-insurers

Should the remarriage termination provision only be applied to new claims, this would result in an annual increase of \$36,131 and would result in a negligible increase in accident fund rates only for those employers of LEOFF members.

Benefit/Rate Impacts for Surviving spouses of all workers

The actuaries projected the termination of the remarriage provision for surviving spouses of all workers would result in costs to the accident fund of:

\$10,594,993 one-time cost increase on existing state fund pensions

\$ 1,618,205 cost for future fatal pensions on existing injuries

\$12,213,198 total cost to accident fund, and a

\$ 2,577,679 one-time cost to self-insurers

Should the remarriage termination provision only be applied to new claims, this would result in an annual increase of \$917,035. The ongoing increase for new claims would result in a 0.09% increase in accident fund rates.

The actuarial analysis assumes that widows who previously chose to take the remarriage settlement prior to any legislative action to provide benefits for life, do not have the right to change their decision and that no benefits will be paid for prior periods.

Alternatives to Offset Potential Costs

- 1) Electing a Reduced Benefit to Provide for a Life-Time Pension

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One suggestion to reduce potential costs was a possible “option” approach in which a surviving spouse would opt to select a reduced monthly death benefit pension in order to provide for ongoing benefits upon remarriage. This method was not given serious consideration.

It goes without saying that an industrial death is a traumatic event. Survivors find themselves suddenly hurled into a life-changing event. As individuals, surviving spouses will react differently with a full range of emotions and must face harsh realities with all the implications that accompany the loss of a loved one. To expect a grieving spouse to make an “option choice”, which has long-term financial ramifications is unrealistic. Usually immediately following the worker’s death, most surviving spouses don’t believe they will ever remarry and would likely find the suggestion offensive.

2) Eliminating the Remarriage Termination Provision on New Claims

As discussed previously the cost impact of continuing death benefits upon remarriage could be lessened by only eliminating the remarriage termination provision for fatal injuries that occur on or after the effective date of any law change. Such would avoid an impact on the contingency reserves, but would potentially impact rates.

Potential Administrative Savings

To consider potential savings from eliminating the remarriage termination provisions, one must first understand the department’s expenditures for discovery and enforcement of the existing law:

1) Declaration of Entitlement

Every surviving spouse receiving a death benefit pension is sent a Declaration of Entitlement annually. This form must be completed in full, signed, notarized and returned to the department within 30 days to avoid an interruption in the payment of benefits. The declaration is used for a variety of purposes: to verify the mailing address, update children and dependent status, report a change in marital status and/or to report being convicted of a crime.

If the current remarriage termination provisions were eliminated, the question concerning a change in marital status could be removed from the form. However, the form would continue to be necessary to gather the other information listed above. This would not result in a change in costs to the department.

2) Cross-Match with Department of Health (DOH)

The department receives marriage and death information monthly from DOH. The marriage information is matched against the list of surviving spouses receiving death benefits.

As part of an information sharing agreement between state agencies, the marriage and death information is obtained at no cost. If the remarriage termination provisions

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changed, there would be no need for the marriage data from DOH; however, there would be no cost savings to the department.

There is a future plan to expand cross-match capabilities to minimally include marriage information from Oregon, Idaho, Nevada and California. Until such time as data sharing agreements are executed with these regional neighboring states, the interim plan under consideration is to use a private data organization for searches on vital statistics.

The estimated cost per record request will be \$100 dollars per state. The \$100 fee does not include the staff time required to request a records check, submit payment for the information and analyze the results. This plan does not have a confirmed start date due to costs.

In the long-term plan to share data with these states through a government-to-government exchange, it is doubtful such data will be obtained at no cost. With the elimination of the remarriage termination provision the record checks would no longer be needed, however, because the plan to address out-of-state records has not been executed, there is no immediate cost savings to the department.

3) Investigations

When the department receives information from a cross-match report or a tip/complaint from the public that a surviving spouse receiving death benefits has remarried without notifying the department, an investigation is initiated.

Investigations are requested electronically and an “investigation type” is designated. There is no method of specifically identifying a remarriage investigation within the pension investigation type.

An attempt was made to ascertain how many remarriage investigations had been done in the past ten years. Very conservatively, it is estimated that 13 cases were completed. Four of these investigations warranted a more in-depth review. It is estimated that on average 35 staff hours were spent on each of these four cases, with an average of 13 hours spent on each of the remaining nine cases. This would represent a total of 257 staff hours in conjunction with remarriage investigations over the past ten years.

If the remarriage termination provision was eliminated, such investigations would no longer be necessary. This would not result in any savings, but would allow investigative resources to be assigned to other cases.

What do other States do?

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The following table was compiled using data from *Workers' Compensation Laws, 2nd Edition*. Information from all fifty states and the District of Columbia was included. Of those 51 jurisdictions, only five states do not have a remarriage termination provision. Of the five states without a remarriage termination, only one provides a lifetime benefit, with pensions in the other four states being statutorily limited by a specified number of weeks or a monetary cap.

Forty-six jurisdictions terminate spousal death benefit pensions upon remarriage. One of those jurisdictions, Nevada, excludes surviving spouses of police officers and fire fighters from the remarriage termination.

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FATALITY BENEFITS PAID UNDER WORKERS' COMPENSATION PROGRAMS AS OF JULY 2008 – REMARRIAGE & DEPENDENCY PROVISIONS⁴

State	Lifetime Pension⁵	Statutorily Limited Pension	Remarriage Termination Provision	No Remarriage Termination Provision
Alabama		Maximum of 500 weeks to dependents	X	
Alaska ⁶		12 years	X	
Arizona	X		X	
Arkansas ⁷		450 weeks for partial dependents	X	
California	X			X
Colorado	X		X	
Connecticut	X		X	
Delaware	X		X	
District of Columbia	X		X	
Florida		\$150,000	X	
Georgia ⁸		\$150,000 for spouse w/o kids	X	
Hawaii		312 weeks	X	
Idaho		500 weeks	X	
Illinois		\$500,000 or 25 years	X	
Indiana		500 weeks	X	
Iowa	X		X	
Kansas		\$250,000		X

⁴ Materials compiled from *Workers' Compensation Laws, 2nd Edition*. Joint publication of IAIABC and WCRI. June 2009.

⁵ These pensions have no statutory limits for dependency benefits.

⁶ Spouse 52 years of age or older or permanently disabled is not subject to 12 year limitation.

⁷ Dependent benefits are outlined in Arkansas statute, § 11-9-527. See appendix for full statute.

⁸ Until age 65 or 400 weeks from date of injury, whichever provides greater benefits.

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State	Lifetime Pension	Statutorily Limited Pension	Remarriage Termination Provision	No Remarriage Termination Provision
Kentucky ⁹	X		X	
Louisiana	X		X	
Maine ¹⁰		If a dependent spouse becomes a dependent of another person, the payments must cease upon the payment to the spouse of the balance of the compensation to which the spouse would otherwise have been entitled but not to exceed \$500.		
Maryland ¹¹		Partial dependency benefits may not exceed \$60,000	X	
Massachusetts	X		X	
Michigan		500 weeks	X	
Minnesota		10 years or 10 years after last child no longer dependent		X
Mississippi		450 weeks	X	
Missouri	X		X	
Montana		500 weeks	X	
Nebraska	X		X	
Nevada ¹²		No limit unless there are partial dependents only, then 100 months	X	Exception - spouses of deceased police & firefighters, NRS 616C.507

⁹ Issue of termination date for spouse's benefit is currently being litigated.

¹⁰ Dependent definitions are located in Maine statute Title 39-A § 102. See Appendix for full statute.

¹¹ Partly dependent individual is defined in Maryland statute § 9-682. See Appendix for full statute.

¹² Partly dependent is defined in Nevada statute NRS 616C.505 (9). See Appendix for full statute.

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State	Lifetime Pension	Statutorily Limited Pension	Remarriage Termination Provision	No Remarriage Termination Provision
New Hampshire	X		X	
New Jersey	X		X	
New Mexico		100% of the state average weekly wage for 700 weeks	X	
New York	X		X	
North Carolina ¹³		400 weeks unless widow/er is physically or mentally disabled		X
North Dakota ¹⁴		\$250,000	X	
Ohio	X		X	
Oklahoma	X		X	
Oregon	X		X	
Pennsylvania	X		X	
Rhode Island	X		X	
South Carolina		500 weeks		X
South Dakota	X		X	
Tennessee	X		X	
Texas		Minimum of 364 weeks would be paid in a fatal claim	X	
Utah		312 weeks of combined benefits excluding permanent total disability	X	
Vermont		After minimum of 330 weeks, spousal benefits end at age 62, when eligible for Social Security	X	
Virginia		500 weeks	X	

¹³ Information is effective as of January 1, 2007 and does not reflect any legislative or rule changes made since that time.

¹⁴ Remarriage payment only applies to remarriages that occur before August 1, 2003. See Appendix for Title 65 § 05 (21), spousal marriage settlements text.

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State	Lifetime Pension	Statutorily Limited Pension	Remarriage Termination Provision	No Remarriage Termination Provision
Washington	X		X	
West Virginia	X		X	
Wisconsin ¹⁵		\$241,500	X	
Wyoming	X		X	

¹⁵ Department will reassign the death benefits to children designated in 102.51(1) and 102.49 Wisconsin Statutes, unless a showing is made that reassignment results in an undue hardship for the spouse. See Appendix for full statute.

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Points for Consideration

- The remarriage termination provision was part of the original 1911 legislation establishing Workers' Compensation.
- As a reflection of the era in which it was written, the original statute provided death benefit pensions to widows or invalid widowers assuming wives to be dependent upon their husbands and invalid husbands upon their wives due to their condition.
- The implementation of the ERA, substituting "surviving spouse" for "widow", essentially eliminated the assumption that survivor benefits only be available where dependency exists.
- Current law provides consistent eligibility application; assumed dependency on the worker grants survivor benefits, assumed dependency on a new spouse terminates the survivor benefits.
- Currently approximately 5,051 surviving spouses are receiving death benefit pensions (fatalities) or pre-option total permanent disability pensions.
- A small percentage of surviving spouses remarry each year.
- Eliminating the remarriage provision would not result in a cost savings to the department.
- Only five states do not have a remarriage termination provision. Of those, only one provides a life-time pension benefit, similar to Washington State.
- Forty-six jurisdictions terminate spousal death benefit pensions upon remarriage. One of those, Nevada, excludes surviving spouses of police officers and fire fighters from the remarriage termination.
- Termination of the remarriage provision for surviving spouses of *only law enforcement officers and fire fighters (LEOFF) workers* would result in a cost to the contingency reserve of \$355,780 and would cost self-insurers \$124,476.
- Applying the termination of the remarriage provision to only *new LEOFF claims* would result in an annual increase of \$36,131 and result in a negligible increase in accident fund rates.
- Termination of the remarriage provision for surviving spouses of *all workers* would result in a cost to the contingency reserve of \$12,213,198 and would cost self-insurers \$2,577,679.
- Applying the termination of the remarriage provision to only *new claims* would result in an annual increase of \$917,035 and result in a 0.09% increase in accident fund rates.

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Discussion/Summary

Should monthly death benefit pension payments be continued for surviving spouses of all workers who remarry?

Termination of death benefit pensions upon remarriage of the surviving spouse is a common established practice within 46 jurisdictions. Such a change would impact a small population of pension recipients and result in a small increase in accident fund costs and ultimately rates.

A pension granted under workers' compensation distinctly differs from a retirement pension. Retirement pensions are accrued over years of working in a specific industry or retirement system. A worker must become vested as required by their specific retirement plan prior to being eligible to receive retirement benefits. During the first day on the job, workers in covered employment are eligible for workers' compensation benefits, up to and including pension benefits if their injury results in permanent disability or death.

A consistent benefit plan for all workers who are covered by workers' compensation insurance is an important element of our system. When a worker dies on the job, the family's suffering is significant no matter what industry employed the worker. Benefits exclusive to the type of work or employer should come from public sources or by means that are supported by workers and/or employers who are at similar risk of harm.

A consistent application of the law is also appropriate. It is not equitable to grant a death benefit pension to a surviving spouse on the basis of assumed dependency through marriage and not have those death benefits terminated upon remarriage, based upon an assumption of dependency on the new spouse. If elimination of the remarriage termination provision is based on the argument that the surviving spouse is not in fact dependent upon the new spouse, then one could also argue that the initial eligibility requirements should also include proof of the surviving spouse's dependency on the worker.

Such an approach would prove difficult. A husband and wife are equal, capable adults in a special relationship. A dependency test would attempt to determine if the surviving spouse was capable of providing for his or her own basic necessities; shelter, food, clothing, or was dependent upon the worker. Factors such as age, education, job skills, child care responsibilities, physical and emotional conditions could be taken into consideration in determining if the surviving spouse was incapable of providing for his or her own support.

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Appendix: Statute definitions

Arkansas

11-9-527.Compensation for death.

(c)Beneficiaries - Amounts

§§ 11-9-501 — 11-9-506, compensation for the death of an employee shall be paid to those persons who were wholly and actually dependent upon the deceased employee in the following percentage of the average weekly wage of the employee and in the following order of preference:

(1)(A)(i)To the widow if there is no child, thirty-five percent (35%), and the compensation shall be paid until her death or remarriage.

(ii)However, the widow shall establish, in fact, some dependency upon the deceased employee before she will be entitled to benefits as provided in this section;

(B)(i)To the widower if there is no child, thirty-five percent (35%), and the compensation shall be paid until his death or remarriage.

(ii)However, the widower shall establish, in fact, some dependency upon the deceased employee before he will be entitled to benefits as provided in this section;

(2)To the widow or widower if there is a child, the compensation payable under subdivision (c)(1) of this section and fifteen percent (15%) on account of each child;

(3)(A)To one (1) child if there is no widow or widower, fifty percent (50%).

(B)If more than one (1) child, and there is no widow or widower, fifteen percent (15%) for each child, and in addition thereto, thirty-five percent (35%) to the children as a class, to be divided equally among them;

(4)To the parents, twenty-five percent (25%) each;

(5)To brothers, sisters, grandchildren, and grandparents, fifteen percent (15%) each.

(d) Terminations of Dependence

(1)In the event the widow remarries before full and complete payment to her of the benefits provided in subsection (c) of this section, there shall be paid to her a lump sum equal to compensation for one hundred four (104) weeks, subject to the limitation set out in §§ 11-9-501 — 11-9-506

(2)A physically or mentally incapacitated child, grandchild, brother, or sister shall be entitled to compensation as a dependent of the deceased employee without regard to age or marital status, but if physically or mentally capacitated to earn a livelihood, dependency shall terminate with the attainment of eighteen (18) years of age or upon marriage. However, benefits to an otherwise eligible child shall not terminate at the age of eighteen (18) years provided the child is a full-time student who has not attained the age of twenty-five (25) years.

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(i) Partial Dependency

(1) If the employee leaves dependents who are only partially dependent upon his or her earnings for support at the time of injury, the compensation payable for partial dependency shall be in the proportion that the partial dependency bears to total dependency.

(2) In any claim for partial dependency where the average weekly contributions for support were not such as to entitle all dependents to compensation in the aggregate sum of seven dollars (\$7.00) per week, the dependents shall receive compensation for a period not to exceed four hundred fifty (450) weeks in an amount not to exceed the amount of average weekly contributions of the deceased employee for the support of the dependents.

History. Init. Meas. 1948, No. 4, § 15, Acts 1949, p. 1420; Acts 1961, No. 479, § 1; Init. Meas. 1968, No. 1, § 4, Acts 1969; Acts 1975 (Extended Sess., 1976), No. 1227, §§ 12, 13; 1981, No. 290, § 5; 1985, No. 842, § 1; 1986 (2nd Ex. Sess.), No. 10, § 6; A.S.A. 1947, § 81-1315; reen. Acts 1987, No. 1015, §§ 12, 13; Acts 1993, No. 796, § 25.

Maine: Dependent definitions, Title 39-A § 102

8. Dependent. "Dependent" means a member of an employee's family or that employee's next of kin who is wholly or partly dependent upon the earnings of the employee for support at the time of the injury. The following persons are conclusively presumed to be wholly dependent for support upon a deceased employee:

A. A wife upon a husband with whom she lives, or from whom she is living apart for a justifiable cause or because he has deserted her, or upon whom she is actually dependent in any way at the time of the injury. A wife living apart from her husband shall produce a court order or other competent evidence as to separation and actual dependency; [1991, c. 885, Pt. A, §8 (NEW); 1991, c. 885, Pt. A, §§9-11 (AFF).]

B. A husband upon a wife with whom he lives, or upon whom he is actually dependent in any way at the time of the injury; and [1991, c. 885, Pt. A, §8 (NEW); 1991, c. 885, Pt. A, §§9-11 (AFF).]

C. A child, including an adopted child or a stepchild, under the age of 18 years, or under the age of 23 years if a student or over the age of 18 years but physically or mentally incapacitated from earning, who is dependent upon the parent with whom the dependent is living or upon whom the dependent is actually dependent in any way at the time of the injury to the parent, there being no surviving dependent parent. For the purposes of this paragraph, "child" includes any dependent posthumous child whose mother is not living. If there is more than one child dependent, the compensation must be divided equally among them.

For the purposes of this paragraph, the term "student" means a person regularly pursuing a full-time course of study or training at an institution that is:

(1) A school, college or university operated or directly supported by the United States or by any state or local government or political subdivision thereof;

(2) A school, college or university that has been accredited by a state or by a state-recognized or nationally recognized accrediting agency or body;

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(3) A school, college or university not accredited pursuant to subparagraph (2) but whose credits are accepted, on transfer, for credit on the same basis as if transferred from an accredited institution by not fewer than 3 institutions accredited pursuant to subparagraph (2); or

(4) An additional type of educational or training institution as defined by the board, but not after the dependent reaches the age of 23 or has completed 4 years of education beyond the high school level, except that, when the dependent's 23rd birthday occurs during a semester or other enrollment period, the dependent continues to be considered a student until the end of the semester or other enrollment period. A child is not deemed to have ceased to be a student during any interim between school years if the interim does not exceed 5 months and if the dependent shows to the satisfaction of the board that the dependent has a bona fide intention of continuing to pursue a full-time course of education or training during the semester or other enrollment period immediately following the interim or during periods of reasonable duration during which, in the judgment of the board, the dependent is prevented by factors beyond the dependent's control from pursuing the dependent's education. A child is not deemed to be a student under this Act during a period of service in the Armed Forces of the United States. [1991, c. 885, Pt. A, §8 (NEW); 1991, c. 885, Pt. A, §§9-11 (AFF).]

In all other cases, questions of total or partial dependency must be determined in accordance with the fact as the fact was at the time of the injury. If there is more than one person wholly dependent, the compensation must be divided equally among them and persons partly dependent, if any, are not entitled to a part of the compensation during the period in which compensation is paid to persons wholly dependent. If there is no one wholly dependent and more than one person who is partly dependent, the compensation must be divided among them according to the relative extent of their dependency. [1999, c. 201, §1 (AMD); 1999, c. 201, §2 (AFF) .]

9. Dependent of another person. For purposes of the payment or the termination of compensation under section 215, "dependent of another person" means a widow or widower of a deceased employee that over 1/2 of that person's support during a calendar year was provided by the other person.

[1991, c. 885, Pt. A, §8 (NEW); 1991, c. 885, Pt. A, §§9-11 (AFF) .]

Maryland: § 9-682. Partly dependent individuals.

(a) *In general.*- The employer or its insurer shall pay a death benefit in accordance with this section if:

(1) there are no individuals who were wholly dependent on the deceased covered employee at the time of death, but there are individuals who were partly dependent; or

(2) a surviving spouse who was wholly dependent on the deceased covered employee at the time of death becomes partly self-supporting.

(b) *Amount of death benefit.*-

(1) The maximum weekly death benefit payable under this section shall equal two-thirds of the average weekly wage of the deceased covered employee, but may not exceed two-thirds of the State average weekly wage.

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(2) The weekly death benefit payable under this section shall be the percentage of the maximum weekly death benefit under paragraph (1) of this subsection that:

(i) the weekly earnings of the deceased covered employee bears to the combined weekly earnings of the deceased covered employee and the partly dependent individuals; and

(ii) does not exceed the maximum weekly death benefit.

(c) *Duration of payment - In general.*- Except as otherwise provided in this section, the employer or its insurer shall pay the weekly death benefit:

(1) for the period of partial dependency; or

(2) until \$75,000 has been paid, including any payments made during a period of total dependency under § 9-681 of this subtitle.

(d) *Duration of payment - Surviving spouse who remarries.*-

(1) Subject to paragraph (2) of this subsection, if a surviving spouse who is partly dependent remarries and does not have dependent children at the time of the remarriage, the employer or its insurer shall make payments to the surviving spouse for 2 years after the date of the remarriage.

(2) The total of the payments made before the remarriage may not exceed \$75,000.

(e) *Duration of payment - Child who becomes 18.*-

(1) Except as provided in paragraphs (2) and (3) of this subsection, the employer or its insurer shall continue to make payments to, or for the benefit of, a surviving child until the child reaches 18 years of age.

(2) If a child who is 18 years old or older remains partly dependent on the deceased covered employee, the employer or its insurer shall continue to make payments in accordance with subsections (b) and (c) of this section.

(3) The employer or its insurer shall continue to make payments to, or for the benefit of, a child who is 18 years old or older for up to 5 years after reaching the age of 18 if:

(i) the child is attending school on a full-time basis; and

(ii) the school offers an educational program or a vocational training program and the program is accredited or approved by the Maryland State Department of Education.

Nevada: Amount and duration of compensation, NRS 616C.505 (9)

Death Benefits

NRS 616C.505 Amount and duration of compensation. If an injury by accident arising out of and in the course of employment causes the death of an employee in the employ of an employer, within the provisions of chapters 616A to 616D, inclusive, of NRS, the compensation is known as a death benefit and is payable as follows:

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1. In addition to any other compensation payable pursuant to chapters 616A to 616D, inclusive, of NRS, burial expenses are payable in an amount not to exceed \$5,000. When the remains of the deceased employee and the person accompanying the remains are to be transported to a mortuary or mortuaries, the charge of transportation must be borne by the insurer.

2. Except as otherwise provided in subsection 3 and NRS 616C.507, to the surviving spouse of the deceased employee, $66 \frac{2}{3}$ percent of the average monthly wage is payable until his death or remarriage, with 2 years' compensation payable in one lump sum upon remarriage.

3. If there is a surviving spouse and any surviving children of the deceased employee who are not the children of the surviving spouse, the compensation otherwise payable pursuant to subsection 2 must be paid as follows until the entitlement of all children of the deceased employee to receive compensation pursuant to this subsection ceases:

(a) To the surviving spouse, 50 percent of the death benefit is payable until his death or remarriage, with 2 years' compensation payable in one lump sum upon remarriage; and

(b) To each child of the deceased employee, regardless of whether the child is the child of the surviving spouse, his proportionate share of 50 percent of the death benefit and, except as otherwise provided in subsection 12, if the child has a guardian, the compensation he is entitled to receive may be paid to the guardian.

4. In the event of the subsequent death of the surviving spouse:

(a) Each surviving child of the deceased employee, in addition to any amount the child may be entitled to pursuant to subsection 3, must share equally the compensation theretofore paid to the surviving spouse but not in excess thereof, and it is payable until the youngest child reaches the age of 18 years.

(b) Except as otherwise provided in subsection 12, if the children have a guardian, the compensation they are entitled to receive may be paid to the guardian.

5. Upon the remarriage of a surviving spouse with children:

(a) The surviving spouse must be paid 2 years' compensation in one lump sum and further benefits must cease; and

(b) Each child must be paid 15 percent of the average monthly wage, up to a maximum family benefit of $66 \frac{2}{3}$ percent of the average monthly wage.

□ The provisions of this subsection do not apply to the remarriage of a surviving spouse of a deceased police officer or firefighter if the provisions of NRS 616C.507 apply to the surviving spouse.

6. If there are any surviving children of the deceased employee under the age of 18 years, but no surviving spouse, then each such child is entitled to his proportionate share of $66 \frac{2}{3}$ percent of the average monthly wage for his support.

7. Except as otherwise provided in subsection 8, if there is no surviving spouse or child under the age of 18 years, there must be paid:

(a) To a parent, if wholly dependent for support upon the deceased employee at the time of the injury causing his death, $33 \frac{1}{3}$ percent of the average monthly wage.

(b) To both parents, if wholly dependent for support upon the deceased employee at the time of the injury causing his death, $66 \frac{2}{3}$ percent of the average monthly wage.

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(c) To each brother or sister until he or she reaches the age of 18 years, if wholly dependent for support upon the deceased employee at the time of the injury causing his death, his proportionate share of 66 2/3 percent of the average monthly wage.

8. The aggregate compensation payable pursuant to subsection 7 must not exceed 66 2/3 percent of the average monthly wage.

9. In all other cases involving a question of total or partial dependency:

(a) The extent of the dependency must be determined in accordance with the facts existing at the time of the injury.

(b) If the deceased employee leaves dependents only partially dependent upon his earnings for support at the time of the injury causing his death, the monthly compensation to be paid must be equal to the same proportion of the monthly payments for the benefit of persons totally dependent as the amount contributed by the deceased employee to the partial dependents bears to the average monthly wage of the deceased employee at the time of the injury resulting in his death.

(c) The duration of compensation to partial dependents must be fixed in accordance with the facts shown, but may not exceed compensation for 100 months.

10. Compensation payable to a surviving spouse is for the use and benefit of the surviving spouse and the dependent children, and the insurer may, from time to time, apportion such compensation between them in such a way as it deems best for the interest of all dependents.

11. In the event of the death of any dependent specified in this section before the expiration of the time during which compensation is payable to him, funeral expenses are payable in an amount not to exceed \$5,000.

12. If a dependent is entitled to receive a death benefit pursuant to this section and is less than 18 years of age or incompetent, the legal representative of the dependent shall petition for a guardian to be appointed for that dependent pursuant to NRS 159.044. An insurer shall not pay any compensation in excess of \$3,000, other than burial expenses, to the dependent until a guardian is appointed and legally qualified. Upon receipt of a certified letter of guardianship, the insurer shall make all payments required by this section to the guardian of the dependent until the dependent is emancipated, the guardianship terminates or the dependent reaches the age of 18 years, whichever occurs first, unless paragraph (a) of subsection 13 is applicable. The fees and costs related to the guardianship must be paid from the estate of the dependent. A guardianship established pursuant to this subsection must be administered in accordance with chapter 159 of NRS, except that after the first annual review required pursuant to NRS 159.176, a court may elect not to review the guardianship annually. The court shall review the guardianship at least once every 3 years. As used in this subsection, "incompetent" has the meaning ascribed to it in NRS 159.019.

13. Except as otherwise provided in paragraphs (a) and (b), the entitlement of any child to receive his proportionate share of compensation pursuant to this section ceases when he dies, marries or reaches the age of 18 years. A child is entitled to continue to receive compensation pursuant to this section if he is:

(a) Over 18 years of age and incapable of supporting himself, until such time as he becomes capable of supporting himself; or

(b) Over 18 years of age and enrolled as a full-time student in an accredited vocational or educational institution, until he reaches the age of 22 years.

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14. As used in this section, “surviving spouse” means a surviving husband or wife who was married to the employee at the time of the employee’s death.

[Part 59:168:1947; A 1949, 659; 1951, 485; 1953, 292; 1955, 901]—(NRS A 1957, 732; 1959, 614; 1963, 1144; 1965, 264; 1966, 46; 1967, 686; 1969, 476; 1973, 533; 1975, 600; 1979, 764, 1059; 1981, 1495; 1989, 333; 1991, 804; 1993, 751; 1999, 1224; 2007, 679, 3358)

North Dakota. Title 65 § 05 (21) Spousal marriage settlements

65-05-21. Marriage settlement to spouse. If a spouse who receives compensation under the provisions of subsection 1 of section 65-05-17 remarries, there shall be paid to such spouse a lump sum equal to one hundred four weeks' compensation. If, prior to such marriage, such spouse has received a partial lump sum settlement which covers all or any portion of the said one hundred four weeks following such spouse's marriage, the amount of such partial lump sum settlement which covers all or any part of the said one hundred four weeks following such spouse's marriage shall be deducted from such marriage settlement, and the spouse shall receive only the remainder, if any, over and above such deduction. Any judgment annulling such marriage shall not reinstate the right of such spouse to compensation if the action for annulment is instituted more than six months after the marriage. The provisions of this section apply only to remarriages that occur before August 1, 2003, regardless of the date of injury or date of death of the decedent.

65-05-38. Death of permanently and totally disabled employee - Surviving spouse. In the case of the death of an injured employee who is receiving permanent total disability benefits, or additional benefits payable, if the injured employee was permanently and totally disabled for at least ten years and was married to the surviving spouse for at least ten years, the decedent's surviving spouse is eligible to receive no more than six months of the decedent's permanent total disability benefits, supplementary benefits, and additional benefits payable in the same manner as the deceased spouse would have been entitled to receive the benefits. A surviving spouse is eligible for benefits under this section if the organization approved the decedent for home health care services and reimbursed the surviving spouse for providing the home health care services. The surviving spouse is not eligible for benefits under this section if the surviving spouse is eligible for benefits under section 65-05-16. The eligibility of the surviving spouse to receive benefits under this section terminates upon the remarriage of the surviving spouse.

Wisconsin Chapter 102, Workers’ Compensation Act

102.45 Benefits payable to minors; how paid. Compensation and death benefit payable to an employee or dependent who was a minor when the employee’s or dependent’s right began to accrue, may, in the discretion of the department, be ordered paid to a bank, trust company, trustee, parent or guardian, for the use of such employee or dependent as may be found best calculated to conserve the employee’s or dependent’s interests. Such employee or dependent shall be entitled to receive payments, in the aggregate, at a rate not less than that applicable to payments of primary compensation for total disability or death benefit as accruing from the employee’s or dependent’s 18th birthday.

History: 1973 c. 150; 1993 a. 492.

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102.46 Death benefit. Where death proximately results from the injury and the deceased leaves a person wholly dependent upon him or her for support, the death benefit shall equal 4 times his or her average annual earnings, but when added to the disability indemnity paid and due at the time of death, shall not exceed two-thirds of weekly wage for the number of weeks set out in s.

102.44 (3).

History: 1979 c. 278; 1981 c. 92.

Death benefits under the worker's compensation law. Fortune. WBB Apr. 1987.

102.47 Death benefit, continued. If death occurs to an injured employee other than as a proximate result of the injury, before disability indemnity ceases, death benefit and burial expense allowance shall be as follows:

(1) Where the injury proximately causes permanent total disability, they shall be the same as if the injury had caused death, except that the burial expense allowance shall be included in the items subject to the limitation stated in s. 102.46. The amount available shall be applied toward burial expense before any is applied toward death benefit. If there are no surviving dependents the amount payable to dependents shall be paid, as provided in s.

102.49 (5) (b), to the fund created under s. 102.65.

(2) Where the injury proximately causes permanent partial disability, the unaccrued compensation shall first be applied toward funeral expenses, not to exceed the amount specified in s.

102.50. Any remaining sum shall be paid to dependents, as provided in this section and ss. 102.46 and 102.48, and there is no liability for any other payments. All computations under this subsection shall take into consideration the present value of future payments. If there are no surviving dependents the amount payable to dependents shall be paid, as provided in s. 102.49 (5) (b), to the fund created under s. 102.65.

History: 1971 c. 148; 1977 c. 195; 1983 a. 98; 1987 a. 179.

When a deceased worker dies before the level of permanent partial disability is established, the dependent's death benefit is not wiped out. "Unaccrued compensation" under sub. (2) is compensation that has not become due, or compensation for which a claim is not yet enforceable. It is not limited to compensation awarded but not yet paid. *Edward Brothers, Inc. v. LIRC*, 2007 WI App 128, 300 Wis. 2d 638, 731 N.W.2d 302, 06-2398.

102.475 Death benefit; law enforcement and correctional officers, fire fighters, rescue squad members, diving team members, national or state guard members and emergency management personnel. (1) SPECIAL BENEFIT. If the deceased employee is a law enforcement officer, correctional officer, fire fighter, rescue squad member, diving team member, national guard member or state defense force member on state active duty as described in s. 102.07 (9) or if a deceased person is an employee or volunteer performing emergency management activities under ch. 166 during a state of emergency or a circumstance described in s. 166.04, who sustained an accidental injury while performing services growing out of and incidental to that employment or volunteer activity so that benefits are payable under s. 102.46 or 102.47 (1), the department shall

Appendix A

voucher and pay from the appropriation under s. 20.445 (1) (aa) a sum equal to 75% of the primary death benefit as of the date of death, but not less than \$50,000 to the persons wholly dependent upon the deceased. For purposes of this subsection, dependency shall be determined under ss. 102.49 and 102.51.

(2) PAYMENTS TO DEPENDENTS. (a) If there are more than 4 persons who are wholly dependent upon the deceased employee an additional benefit of \$2,000 shall be paid for each dependent in excess of 4.

(b) If there is more than one person who is wholly dependent upon the deceased employee, the benefits under this section shall be apportioned between such dependents on the same proportional basis as the primary death benefit.

(c) Notwithstanding sub. (1), if there are partial dependents of the deceased employee who are entitled to benefits under s.

102.48, they shall be entitled to such portion of the benefit determined under sub. (1) that their partial dependency benefit bears to the primary benefit payable to one wholly dependent upon the deceased. No payment to a partial dependent shall be less than \$1,000.

(3) DISPUTES. In case of dispute, dependents may file applications as provided in s. 102.17, and ss. 102.17 to 102.27 shall apply. In such case, if the claim for a primary death benefit is compromised, any claim under this section shall be compromised on the same proportional basis. The attorney general shall represent the interests of the state in case of such dispute.

(5) MINORS. Benefits due to minors under this section may be paid as provided in s. 102.45.

(6) PROOF. In administering this section the department may require reasonable proof of birth, marriage, domestic partnership under ch. 770, relationship, or dependency.

(7) NOT TO AFFECT OTHER RIGHTS, BENEFITS OR COMPENSATION.

The compensation provided for in this section is in addition to, and not exclusive of, any pension rights, death benefits or other compensation otherwise payable by law.

(8) DEFINITIONS. As used in this section:

(a) "Correctional officer" means any person employed by the state or any political subdivision as a guard or officer whose principal duties are supervision and discipline of inmates at a penal institution, prison, jail, house of correction or other place of penal detention.

(am) "Diving team member" means a member of a legally organized diving team.

(b) "Fire fighter" means any person employed by the state or any political subdivision as a member or officer of a fire department or a member of a volunteer department, including the state fire marshal and deputies.

(c) "Law enforcement officer" means any person employed by the state or any political subdivision for the purpose of detecting and preventing crime and enforcing laws or ordinances and who is authorized to make arrests for violations of the laws or ordinances the person is employed to enforce, whether that enforcement authority extends to all laws or ordinances or is limited to specific laws or ordinances.

(d) "Political subdivision" includes counties, municipalities and municipal corporations.

(dm) "Rescue squad member" means a member of a legally organized rescue squad.

(e) "State" means the state of Wisconsin and its departments, divisions, boards, bureaus, commissions, authorities and colleges and universities.

Appendix A

History: 1975 c. 274, 421; 1977 c. 29 ss. 1029m to 1029s, 1650; 1977 c. 48, 203, 418; 1979 c. 110 s. 60 (11); 1979 c. 221; 1981 c. 325; 1983 a. 98, 189; 1985 a. 29; 1987 a. 63; 1991 a. 85; 1993 a. 81; 1995 a. 247; 1999 a. 14; 2009 a. 28.

102.48 Death benefit. If no person who survives the deceased employee is wholly dependent upon the deceased employee for support, partial dependency and death benefits therefor shall be as follows:

(1) An unestranged surviving parent or parents to whose support the deceased has contributed less than \$500 in the 52 weeks next preceding the injury causing death shall receive a death benefit of \$6,500. If the parents are not living together, the department shall divide this sum in such proportion as it deems to be just, considering their ages and other facts bearing on dependency.

(2) In all other cases the death benefit shall be such sum as the department shall determine to represent fairly and justly the aid to support which the dependent might reasonably have anticipated from the deceased employee but for the injury. To establish anticipation of support and dependency, it shall not be essential that the deceased employee made any contribution to support. The aggregate benefits in such case shall not exceed twice the average annual earnings of the deceased; or 4 times the contributions of the deceased to the support of such dependents during the year immediately preceding the deceased employee's death, whichever amount is the greater. In no event shall the aggregate benefits in such case exceed the amount which would accrue to a person solely and wholly dependent. Where there is more than one partial dependent the weekly benefit shall be apportioned according to their relative dependency. The term "support" as used in ss. 102.42 to 102.63 shall include contributions to the capital fund of the dependents, for their necessary comfort.

(3) A death benefit, other than burial expenses, except as otherwise provided, shall be paid in weekly installments corresponding in amount to two-thirds of the weekly earnings of the employee, until otherwise ordered by the department.

History: 1975 c. 147; 1979 c. 278; 1989 a. 64; 1993 a. 492.

Cross Reference: See also s. DWD 80.46, Wis. adm. code.

102.49 Additional death benefit for children, state fund. (1) When the beneficiary under s. 102.46 or 102.47 (1) is the spouse or domestic partner under ch. 770 of the deceased employee and is wholly dependent for support, an additional death benefit shall be paid from the funds provided by sub. (5) for each child by their marriage or domestic partnership under ch. 770 who is living at the time of the death of the employee, and who is likewise wholly dependent upon the employee for support. That payment shall commence at the time that primary death benefit payments are completed or, if advancement of compensation has been paid, at the time when payments would normally have been completed. Payments shall continue at the rate of 10% of the surviving parent's weekly indemnity until the child's 18th birthday. If the child is physically or mentally incapacitated, payments may be continued beyond the child's 18th birthday but the payments may not continue for more than a total of 15 years.

(2) A child lawfully adopted by the deceased employee and the surviving spouse or domestic partner under ch. 770, prior to the time of the injury, and a child not the deceased employee's own by birth or adoption but living with the deceased employee as a member of the deceased employee's family at the time of the injury shall for the

Appendix A

purpose of this section be taken as a child by their marriage or domestic partnership under ch. 770.

(3) If the employee leaves a spouse or domestic partner under ch. 770 wholly dependent and also a child by a former marriage, domestic partnership under ch. 770, or adoption, likewise wholly dependent, aggregate benefits shall be the same in amount as if the child were the child of the surviving spouse or partner, and the entire benefit shall be apportioned to the dependents in the amounts that the department determines to be just, considering the ages of the dependents and other factors bearing on dependency. The benefit awarded to the surviving spouse or partner shall not exceed 4 times the average annual earnings of the deceased employee.

(4) Dependency of any child for the purposes of this section shall be determined according to s. 102.51 (1), in like manner as would be done if there was no surviving dependent parent.

(5) (a) In each case of injury resulting in death, the employer or insurer shall pay into the state treasury the sum of \$20,000. (b) In addition to the payment required under par. (a), in each case of injury resulting in death leaving no person dependent for support, the employer or insurer shall pay into the state treasury the amount of the death benefit otherwise payable, minus any payment made under s. 102.48 (1), in 5 equal annual installments with the first installment due as of the date of death. (c) In addition to the payment required under par. (a), in each case of injury resulting in death, leaving one or more persons partially dependent for support, the employer or insurer shall pay into the state treasury an amount which, when added to the sums paid or to be paid on account of partial dependency and under s. 102.48 (1), shall equal the death benefit payable to a person wholly dependent. (d) The payment into the state treasury shall be made in all such cases regardless of whether the dependents or personal representatives of the deceased employee commence action against a third party under s. 102.29. If the payment is not made within 20 days after the department makes request therefor, any sum payable shall bear interest at the rate of 7% per year. (e) The adjustments in liability provided in ss. 102.57, 102.58, and 102.60 do not apply to payments made under this section.

(6) The department may award the additional benefits payable under this section to the surviving parent of the child, to the child's guardian or to such other person, bank or trust company for the child's use as may be found best calculated to conserve the interest of the child. In the case of death of a child while benefits are still payable there shall be paid the reasonable expense for burial, not exceeding \$1,500.

(7) All payments received under this section shall be deposited in the fund established by s. 102.65.

History: 1971 c. 260 s. 92 (4); 1975 c. 147, 199; 1977 c. 195; 1979 c. 110 s. 60 (13); 1979 c. 278, 355; 1985 a. 83; 1991 a. 85; 1993 a. 492; 1997 a. 253; 2003 a. 144; 2005 a. 172; 2009 a. 28.

Cross Reference: See also s. DWD 80.48, Wis. adm. code.

Death benefits for dependent children are not increased by s. 102.57. *Schwartz v. DILHR*, 72 Wis. 2d 217, 240 N.W.2d 173 (1976).

102.51 Dependents. (1) WHO ARE. (a) The following persons are entitled to death benefits as if they are solely and wholly dependent for support upon a deceased employee:

Appendix A

1. A wife upon a husband with whom she is living at the time of his death.
 2. A husband upon a wife with whom he is living at the time of her death.
 - 2m. A domestic partner under ch. 770 upon his or her partner with whom he or she is living at the time of the partner's death.
 3. A child under the age of 18 years upon the parent with whom he or she is living at the time of the death of the parent, there being no surviving dependent parent.
 4. A child over the age of 18 years, but physically or mentally incapacitated from earning, upon the parent with whom he or she is living at the time of the death of the parent, there being no surviving dependent parent.
- (b) Where a dependent who is entitled to death benefits under this subsection survives the deceased employee, all other dependents shall be excluded. The charging of any portion of the support and maintenance of a child upon one of the parents, or any voluntary contribution toward the support of a child by a parent, or an obligation to support a child by a parent constitutes living with any such parent within the meaning of this subsection.

(2) WHO ARE NOT. (a) No person shall be considered a dependent unless that person is a spouse, a domestic partner under ch. 770, a divorced spouse who has not remarried, or a lineal descendant, lineal ancestor, brother, sister, or other member of the family, whether by blood or by adoption, of the deceased employee. (b) If for 8 years or more prior to the date of injury a deceased employee has been a resident of the United States, it shall be conclusively presumed that no person who has remained a nonresident alien during that period is either totally or partially dependent upon the deceased employee for support. (c) No person who is a nonresident alien shall be found to be either totally or partially dependent on a deceased employee for support who cannot establish dependency by proving contributions from the deceased employee by written evidence or tokens of the transfer of money, such as drafts, letters of credit, microfilm or other copies of paid share drafts, canceled checks, or receipts for the payment to any bank, express company, United States post office, or other agency commercially engaged in the transfer of funds from one country to another, for transmission of funds on behalf of said deceased employee to such nonresident alien claiming dependency. This provision shall not be applicable unless the employee has been continuously in the United States for at least one year prior to his or her injury, and has been remuneratively employed therein for at least 6 months.

(3) DIVISION AMONG DEPENDENTS. If there is more than one person wholly or partially dependent, the death benefit shall be divided between such dependents in such proportion as the department shall determine to be just, considering their ages and other facts bearing on such dependency.

(4) DEPENDENCY AS OF THE DATE OF DEATH. Questions as to who is a dependent and the extent of his or her dependency shall be determined as of the date of the death of the employee, and the dependent's right to any death benefit becomes fixed at that time,

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regardless of any subsequent change in conditions. The death benefit shall be directly recoverable by and payable to the dependents entitled thereto or their legal guardians or trustees. In case of the death of a dependent whose right to a death benefit has thus become fixed, so much of the benefit as is then unpaid is payable to the dependent's personal representatives in gross, unless the department determines that the unpaid benefit shall be reassigned, under sub. (6), and paid to any other dependent who is physically or mentally incapacitated or a minor. A posthumous child is for the purpose of this subsection a dependent as of the date of death.

(5) WHEN NOT INTERESTED. No dependent of an injured employee shall be deemed a party in interest to any proceeding by the employee for the enforcement of the employee's claim for compensation, nor with respect to the compromise thereof by such employee. A compromise of all liability entered into by an employee is binding upon the employee's dependents, except that any dependent of a deceased employee may submit the compromise for review under s. 102.16 (1).

(6) DIVISION AMONG DEPENDENTS. Benefits accruing to a minor dependent child may be awarded to either parent in the discretion of the department. Notwithstanding sub. (1), the department may reassign the death benefit, in accordance with their respective needs for the death benefit as between a surviving spouse or a domestic partner under ch. 770 and children designated in sub. (1) and s. 102.49.

(7) CERTAIN DEFENSE BARRED. In proceedings for the collection of primary death benefit or burial expense it shall not be a defense that the applicant, either individually or as a partner or member, was an employer of the deceased.

History: 1975 c. 94, 147; 1977 c. 195; 1981 c. 92; 1983 a. 98, 368; 1993 a. 112, 492; 1995 a. 225; 1997 a. 253; 1999 a. 162; 2009 a. 28.

Cross Reference: See also s. DWD 80.48, Wis. adm. code.

A posthumously born illegitimate child does not qualify as a dependent under sub.

(4). Claimants not falling within one of the classifications under sub. (2) (a) will not qualify for benefits, regardless of dependency in fact. *Larson v. DILHR*, 76 Wis. 2d 595, 252 N.W.2d 33 (1977).

Sub. (5) has no application to a claim for a death benefit because a death benefit claim is not an "employee's claim for compensation." While sub. (5) prohibits a dependent from being a party to a worker's claim for disability benefits, a dependent claiming a death benefit is prosecuting only his or her own claim. *Edward Brothers, Inc. v. LIRC*, 2007 WI App 128, 300 Wis. 2d 638, 731 N.W.2d 302, 06-2398.

Appendix B

States Allowing Continuation of Benefits after Survivor Remarriage (2009)

<p>Kansas</p>	<p><u>44-510b. Compensation where death results from injury; compensation upon remarriage; apportionment; burial expenses; limitations on compensation; annual statement by surviving spouse.</u></p> <p>(1) If the employee leaves a surviving legal spouse or a wholly dependent child or children, or both, who are eligible for benefits under this section, then all death benefits shall be paid to such surviving spouse or children, or both, and no benefits shall be paid to any other wholly or partially dependent persons.</p> <p>(2) A surviving legal spouse shall be paid compensation benefits for life, except as otherwise provided in this section.</p> <p>(4) If the employee leaves no legal spouse or dependent children eligible for benefits under this section but leaves other dependents wholly dependent upon the employee's earnings, such other dependents shall receive weekly compensation benefits as provided in this subsection until death, remarriage or so long as such other dependents do not receive more than 50% of their support from any other earnings or income or from any other source, except that the maximum benefits payable to all such other dependents, regardless of the number of such other dependents, shall not exceed a maximum amount of \$18,500.</p> <p>(g) The marriage or death of any dependent shall terminate all compensation, under this section, to such dependent except the marriage of the surviving legal spouse shall not terminate benefits to such spouse. Upon the death of the surviving legal spouse or the marriage or death of a dependent child, the compensation payable to such spouse or child shall be reapportioned to those, among the surviving legal spouse and dependent children, who remain eligible to receive compensation under this section.</p>
<p>Minnesota</p> <p>Per MN worker's comp staff, benefits do not cease or suspend due to remarriage after 10/1/83, per Ott v. Krans</p>	<p><u>176.111 Dependents, allowances.</u></p> <p>Subd. 1. Persons wholly dependent, presumption. For the purposes of this chapter the following persons are conclusively presumed to be wholly dependent: (a) spouse, unless it be shown that the spouse and decedent were voluntarily living apart at the time of the injury or death;</p> <p>Subd. 6. Spouse, no dependent child. If the deceased employee leaves a dependent surviving spouse and no dependent child, there shall be paid to the spouse weekly workers' compensation benefits at 50 percent of the weekly wage at the time of the injury for a period of ten years, including adjustments as provided in section 176.645.</p> <p>Subd. 9a. Remarriage of spouse. A surviving spouse who remarries and is receiving benefits under subdivision 6, 7, or 8 shall continue to be eligible to receive weekly benefits for the remaining period that the spouse is entitled to receive benefits pursuant to this section.</p> <p><i>Winter, deceased by Winter Ott v. D.J. Krans, 3/31/04* DOD: 11/24/97</i></p> <p>Dependency Benefits – Remarriage of Spouse</p> <p>Minnesota Statutes §176.111, subd. 8</p> <p>Minnesota Statutes §176.111, subd. 9a</p> <p>Minnesota Statutes §176.111, subd. 16</p> <p>The purpose of Minnesota Statutes §176.111 is to provide wage replacement benefits to a surviving spouse and dependent children. We cannot conclude the phrase "continue to be eligible to receive" requires that benefits to the surviving spouse be suspended upon remarriage. Rather, the dependency statute, as amended effective Jan. 1, 1984, continues to provide for the continuation of benefits to a surviving spouse upon remarriage. Affirmed.</p>

Nevada	<p><u>NRS 616C.505 Amount and duration of compensation.</u></p> <p>1. If an injury by accident arising out of and in the course of employment causes the death of an employee in the employ of an employer, within the provisions of chapters 616A to 616D, inclusive, of NRS, the compensation is known as a death benefit and is payable as follows:</p> <p>2. Except as otherwise provided in subsection 3 and NRS 616C.507, to the surviving spouse of the deceased employee, 66 2/3 percent of the average monthly wage is payable until his death or remarriage, with 2 years' compensation payable in one lump sum upon remarriage.</p> <p><u>NRS 616C.507 Duration of compensation for surviving spouse of police officer or firefighter.</u></p> <p>1. Except as otherwise provided in this section, if the surviving spouse of a deceased police officer or firefighter who died while actively employed as a police officer or firefighter is entitled to be paid compensation pursuant to subsection 2 of NRS 616C.505 or NRS 617.453, 617.455, 617.457, 617.485 or 617.487, the surviving spouse:</p> <p style="padding-left: 40px;">(a) Must be paid that compensation until the death of the surviving spouse, whether or not the surviving spouse remarries; and</p> <p style="padding-left: 40px;">(b) Must not be paid any compensation pursuant to subsection 2 of NRS 616C.505 or NRS 617.453, 617.455, 617.457, 617.485 or 617.487 in one lump sum upon remarriage.</p> <p>(Added to NRS by 2007, 678)</p>
North Dakota	<p><u>65-05-21. Marriage settlement to spouse.</u></p> <p>If a spouse who receives compensation under the provisions of subsection 1 of section 65-05-17 remarries, there shall be paid to such spouse a lump sum equal to one hundred four weeks' compensation. If, prior to such marriage, such spouse has received a partial lump sum settlement which covers all or any portion of the said one hundred four weeks following such spouse's marriage, the amount of such partial lump sum settlement which covers all or any part of the said one hundred four weeks following such spouse's marriage shall be deducted from such marriage settlement, and the spouse shall receive only the remainder, if any, over and above such deduction. Any judgment annulling such marriage shall not reinstate the right of such spouse to compensation if the action for annulment is instituted more than six months after the marriage. The provisions of this section apply only to remarriages that occur before August 1, 2003, regardless of the date of injury or date of death of the decedent.</p>



Remarriage Prohibition

Comprehensive Report Follow-up
November 19, 2014

Issue

A policy inconsistency exists between Workers' Compensation benefits and retirement benefits

A survivor who remarries will continue to receive retirement benefits but may lose Workers' Compensation benefits

Overview

Remarriage is not prohibited in any state administered retirement plan

Issue was addressed in 2007-2010

- 2007 & 2008, HB 1545 by Representative Kirby
- 2009 Interim
 - Legislature requested information from L&I
 - Studied by LEOFF 2 Board
- 2010, SB 6407 by LEOFF 2 Board

Background

Retirement Benefits for Survivors

- If a survivor selects a monthly benefit and remarries, there is no impact on their receipt of survivor benefits
- This is true for ALL state plans, not just LEOFF

Background

Worker's Compensation Benefits for Survivors

- **Immediate work-related death:** surviving spouses receive a monthly benefit, until they remarry.
- **Totally disabled, then die and it was related to the claim:** surviving spouses receive a monthly benefit, until they remarry.
 - Final lump sum settlement
 - Decline settlement, keep it in trust
- **Totally disabled, then die and it was not related to the claim:** benefits do not stop if a survivor option was chosen, even if the survivor remarries.

Background

Board Study

- In 2009 found 4 states without Remarriage Prohibition
- One had a specific exemption for LEOs and FFs

Administrative Issues

- Removing the prohibition from the Department of Labor and Industries (LNI) statutes could assist the agency
 - Challenges tracking survivor remarriages = overpayments

Options

Option 1 - Take no further action

Option 2 - Direct staff to provide updated information and a bill draft in a final proposal

Questions?

Contact:

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Research Analyst

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SCPP Update

ATTACHMENTS:

Description		Type
	Oct 21 SCPP Agenda	Report
	Nov 18 SCPP Agenda	Report

Select Committee on Pension Policy

P.O. Box 40914
Olympia, WA 98504-0914
actuary.state@leg.wa.gov

Regular Committee Meeting

October 21, 2014
10:00 a.m. – 12:00 p.m.*
Senate Hearing Room 4
Olympia

AGENDA

- 10:00 a.m. **1. Approval Of Minutes**
- 10:05 a.m. **2. Preliminary 2015 Meeting Dates – Kelly
Burkhart, Administrative Services Manager**
- 10:15 a.m. **3. LEOFF 2 Board Update – Steve Nelsen,
Executive Director, LEOFF 2 Board**

Work Session

- 10:35 a.m. **4. Annuity Purchase – Devon Nichols, Policy
Analyst**
- 11:00 a.m. **5. Late Employer Reporting/Dolan – Aaron
Gutierrez, Senior Policy Analyst**

Educational Briefing

- 11:25 a.m. **6. Policy Implications Of Supreme Court
Decisions (Gain Sharing And UCOLA) –
Anne Hall and Sarah Blocki, AGO**
- 11:45 a.m. **7. Public Comment**
- 12:00 p.m. **8. Adjourn**

**These times are estimates and are subject to change depending on the needs of the Committee.*

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***Senator Barbara Bailey,
Chair**

***John Boesenberg**
PERS/Higher Ed Employer

Representative Bruce Chandler

Senator Steve Conway

Randy Davis
TRS Actives

***Eugene Forrester**
TRS Retirees

***Marcie Frost, Director**
Department of Retirement Systems

Senator Steve Hobbs

Corky Holloway
PERS Employers

Robert Keller
PERS Actives

**Representative Matt
Manweller**

Vacant
Employers

Glenn Olson
PERS Employers

***Representative Timm
Ormsby, Vice Chair**

Senator Mark Schoesler

David Schumacher, Director
Office of Financial Management

Representative Pat Sullivan

***J. Pat Thompson**
PERS Actives

Robert Thurston
WSPRS Retirees

David Westberg
SERS Actives

**Executive Committee*

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Select Committee on Pension Policy

P.O. Box 40914
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Regular Committee Meeting

November 18, 2014
10:00 a.m. – 12:30 p.m.*
Senate Hearing Room 4
Olympia

AGENDA

- 10:00 a.m. **1. Approval Of Minutes**
- 10:05 a.m. **2. Adoption Of 2015 Meeting Dates – Kelly
Burkhart, Administrative Services Manager**
- 10:15 a.m. **3. Update On Budget Environment – David
Pringle, House Senior Counsel, and Pete
Cutler, Senate Senior Fiscal Analyst**
- 10:35 a.m. **4. GASB Update – Aaron Gutierrez, Senior
Policy Analyst, and Luke Masselink, Actuary**

Work Session

- 10:55 a.m. **5. Annuity Purchase – Darren Painter, Policy
and Research Services Manager**
- 11:20 a.m. **6. Early Retirement Factors (Retire-Rehire) –
Aaron Gutierrez**

Possible Work Session

- 11:45 a.m. **7. PSERS Proposal – Darren Painter**

Public Hearing and Possible Executive Session

- 12:10 p.m. **8. DRS Corrections (Retire-Rehire) – Aaron
Gutierrez**
- 12:30 p.m. **9. Adjourn**

**These times are estimates and are subject to change depending on the needs of the Committee.*

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***Senator Barbara Bailey,
Chair**

***John Boesenberg**
PERS/Higher Ed Employer

Representative Bruce Chandler

Senator Steve Conway

Randy Davis
TRS Actives

***Eugene Forrester**
TRS Retirees

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Corky Holloway
PERS Employers

Robert Keller
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**Representative Matt
Manweller**

Vacant
Employers

Glenn Olson
PERS Employers

***Representative Timm
Ormsby, Vice Chair**

Senator Mark Schoesler

David Schumacher, Director
Office of Financial Management

Representative Pat Sullivan

***J. Pat Thompson**
PERS Actives

Robert Thurston
WSPRS Retirees

David Westberg
SERS Actives

***Executive Committee**

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Budget Update

ATTACHMENTS:

	Description	Type
	Budget Update	Report

341-LEOFF Plan 2, Monthly Fiscal Budget Report, 2015 Biennium-To-Date Through September 2014

<u>Category</u>	<u>Bien Allotment</u>	<u>BTD Allotment</u>	<u>BTD Expenditures</u>	<u>BTD Variance</u>	<u>Bien Remaining</u>
Salaries and Wages	1,170,787	737,866	675,576	62,290	495,211
Employee Benefits	320,584	202,382	192,886	9,496	127,698
Professional Service Contracts	95,605	73,016	26,700	46,316	68,905
Goods and Other Services	597,083	378,575	382,343	(3,768)	214,740
Travel	109,662	76,002	76,363	(361)	33,299
Capital Outlays	16,500	14,500	11,215	3,285	5,285
Interagency Reimbursements	(53,221)	(53,221)	(53,221)	0	0
Grants, Benefits & Client Services	0	0	400	(400)	(400)
Total Dollars	2,257,000	1,429,120	1,312,262	116,858	944,738

<u>Category</u>	<u>Bien Allotment</u>	<u>BTD Allotment</u>	<u>BTD Expenditures</u>	<u>BTD Variance</u>	<u>Bien Remaining</u>
Salaries and Wages	1,170,787	737,866	675,576	62,290	495,211
AA State Classified	803,287	503,908	450,521	53,387	352,766
AC State Exempt	367,500	233,958	222,762	11,196	144,738
AS Sick Leave Buy-Out	0	0	2,293	(2,293)	(2,293)
Employee Benefits	320,584	202,382	192,886	9,496	127,698
BA Old Age and Survivors Insurance	73,305	45,333	41,149	4,185	32,157
BB Retirement and Pensions	99,785	62,354	61,662	692	38,123
BC Medical Aid & Industrial Insurance	9,370	5,784	4,046	1,738	5,324
BD Health, Life & Disability Insurance	119,470	77,400	75,727	1,674	43,744
BE Allowances	1,600	1,000	629	371	971
BH Hospital Insurance (Medicare)	17,054	10,511	9,649	862	7,405
BZ Other Employee Benefits	0	0	25	(25)	(25)
Professional Service Contracts	95,605	73,016	26,700	46,316	68,905
CA Management and Organizational Services	29,984	25,012	26,700	(1,688)	3,284
CC Financial Services	17,764	13,696	0	13,696	17,764
CJ Training Services	36,436	25,010	0	25,010	36,436
CZ Other Professional Services	11,421	9,298	0	9,298	11,421
Goods and Other Services	597,083	378,575	382,343	(3,768)	214,740
EA Supplies and Materials	8,400	5,250	2,418	2,832	5,982
EB Communications/Telecommunications	27,000	16,875	14,223	2,652	12,777
EC Utilities	12,000	7,500	6,327	1,174	5,674
ED Rentals and Leases - Land & Buildings	93,840	58,650	57,443	1,208	36,398
EE Repairs, Alterations & Maintenance	1,992	1,245	276	969	1,716
EF Printing and Reproduction	50,160	33,750	17,587	16,163	32,573
EG Employee Prof Dev & Training	36,000	22,500	44,195	(21,695)	(8,195)
EH Rental & Leases - Furn & Equipment	9,960	6,225	5,813	412	4,147
EJ Subscriptions	2,236	1,638	2,894	(1,256)	(658)
EK Facilities and Services	15,000	9,375	7,493	1,882	7,507

<u>Category</u>		<u>Bien Allotment</u>	<u>BTD Allotment</u>	<u>BTD Expenditures</u>	<u>BTD Variance</u>	<u>Bien Remaining</u>
EL	Data Processing Services (Interagency)	12,900	6,150	5,008	1,142	7,892
EM	Attorney General Services	45,000	28,125	35,266	(7,141)	9,734
EN	Personnel Services	3,008	2,630	8,209	(5,579)	(5,201)
EP	Insurance	2,100	2,100	75	2,025	2,025
ER	Other Contractual Services	263,073	164,893	161,956	2,937	101,117
ET	Audit Services	7,019	7,019	12,726	(5,707)	(5,707)
EW	Archives & Records Management Svcs	120	75	75	0	45
EY	Software Licenses and Maintenance	6,000	3,750	188	3,562	5,812
EZ	Other Goods and Services	1,275	825	170	655	1,105
Travel		109,662	76,002	76,363	(361)	33,299
GA	In-State Subsistence & Lodging	27,222	20,022	22,059	(2,037)	5,163
GB	In-State Air Transportation	3,671	2,771	3,386	(615)	285
GC	Private Automobile Mileage	21,476	13,781	14,376	(595)	7,100
GD	Other Travel Expenses	9,424	6,724	6,102	622	3,322
GF	Out-Of-State Subsistence & Lodging	33,042	22,917	19,742	3,175	13,300
GG	Out-Of-State Air Transportation	14,827	9,787	10,699	(912)	4,128
Capital Outlays		16,500	14,500	11,215	3,285	5,285
JA	Noncapitalized Assets	15,540	13,540	10,688	2,852	4,852
JB	Noncapitalized Software	960	960	527	433	433
Grants, Benefits & Client Services		0	0	400	(400)	(400)
NZ	Other Grants and Benefits	0	0	400	(400)	(400)
Interagency Reimbursements		(53,221)	(53,221)	(53,221)	0	0
SA	Salaries and Wages	(47,621)	(47,621)	(47,621)	0	0
SB	Employee Benefits	(5,600)	(5,600)	(5,600)	0	0
Total Dollars		<u>2,257,000</u>	<u>1,429,120</u>	<u>1,312,262</u>	<u>116,858</u>	<u>944,738</u>



Report on DRS Contract Review

Date Presented:

11/19/2014

Presenter Name and Title:

Steve Nelsen, Executive Director

Summary:

Following a series of articles highlighting questionable reemployment practices, DRS reviewed local employer contracts for the services of retirees. This report is a summary of their findings.

Strategic Linkage:

This item supports the following Strategic Priority Goals:
Inform the stakeholders.



Final Actuarial Valuation & Audit Report

Date Presented:

11/19/2014

Presenter Name and Title:

Steve Nelsen, Executive Director

Strategic Linkage:

This item supports the following Strategic Priority Goals:
Maintain the financial integrity of the plan.

ATTACHMENTS:

Description		Type
📎	2013 Actuarial Valuation Report	Report
📎	Milliman Audit Report	Report

WASHINGTON STATE Law Enforcement Officers' and Fire Fighters' Plan 2 Retirement Board



2013 Actuarial Valuation Report



Office of the State Actuary

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Report Preparation

Office of the State Actuary

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LEOFF Plan 2 Retirement Board

Steve Nelsen
Executive Director

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Paul Neal
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Photo Credit: Charles Middleton, "Fire Fighter Saving Girl."

Additional Assistance

Department of Retirement Systems
Washington State Investment Board

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Letter of Introduction Law Enforcement Officers' and Fire Fighters' Retirement System Plan 2 Actuarial Valuation Report As of June 30, 2013

October 2014

As required under Chapter 41.45 RCW, this report documents the results of an actuarial valuation of the Law Enforcement Officers' and Fire Fighters' Retirement System Plan 2 (LEOFF 2).

The primary purpose of this valuation is to determine contribution requirements for LEOFF 2 for the plan year ending June 30, 2013, under the funding policy established by the LEOFF 2 Retirement Board. This valuation also provides information on the funding progress and developments in the plan over the past year.

This report is organized into the following four sections.

- ❖ Summary of Key Results.
- ❖ Actuarial Exhibits.
- ❖ Participant Data.
- ❖ Appendices.

The Summary of Key Results section provides a high-level summary of the valuation results for LEOFF 2. The next two sections of the report provide detailed actuarial asset and liability information and participant data. The Appendices provide a summary of the principal actuarial assumptions and methods, a summary of the major plan provisions, and additional information used to prepare this valuation.

We encourage you to submit any questions you might have concerning this report to our regular address or our e-mail address at state.actuary@leg.wa.gov. We also invite you to visit our website (osa.leg.wa.gov), for further information regarding the actuarial funding of the Washington State retirement systems.

Sincerely,

Matthew M. Smith, FCA, EA, MAAA
State Actuary

Lisa A. Won, ASA, FCA, MAAA
Senior Actuary

Section One

Summary of Key Results



Intended Use

The purpose of this report is to develop contribution rates required to fund the Law Enforcement Officers' and Fire Fighters' Retirement System (LEOFF) Plan 2 based on the funding policies described in this section. This report provides information on the contribution rates, the funding progress, and developments in the plan over the past year. This report also discloses the data, assumptions, and methods we used to develop the contribution rates. This report is not intended to satisfy the accounting requirements under the Governmental Accounting Standards Board (GASB) rules.

Contribution Rates

The Office of the State Actuary (OSA) calculated the member, employer, and state contribution rates as a percentage of salary based on the long-term funding policy adopted by the LEOFF 2 Retirement Board (the Board). The summary table to the right shows contribution rates based on the 2013 valuation along with comparable rates from the previous valuation. The **Actuarial Exhibits** section of this report shows how we developed these rates.

Contribution Rates		
	2013	2012
Member	7.97%	7.74%
Employer*	4.78%	4.64%
State	3.19%	3.10%

**Excludes administrative expense rate.*

During the 2012 Interim, the Board adopted a short-term and temporary funding policy to hold contribution rates at a minimum level to manage the risk of increasing contribution rates in the future. This short-term policy includes minimum contribution rates based on 100 percent of the normal cost calculated under the Entry Age Normal (EAN) funding method instead of 90 percent (the Board's long-term policy). During the 2014 Interim, and after receiving the results of this actuarial valuation, the Board adopted contribution rates for the 2015-17 Biennium that maintain contribution rates at current levels. Based on the results of this actuarial valuation, current contribution rates fall in between the rates calculated under the Board's short and long-term funding policies. Please see the **Actuarial Certification Letter** for further details on this temporary funding policy. The table to the left shows the contribution rates adopted by the Board for 2013-17.

Adopted Contribution Rates*	
Member	8.41%
Employer**	5.05%
State	3.36%

**Adopted for period 2013-17.*

***Excludes administrative expense rate.*

Contribution Rate-Setting Cycle

Under current Washington State law, in July of even-numbered years, the Board reviews the basic contribution rates calculated by the Board-retained actuary based on an actuarial valuation performed on asset, participant, and plan information compiled in odd-numbered years. In calculating basic contribution rates, the Board-retained actuary applies the statutory funding policies described in this section. The Board then adopts contribution rates for LEOFF Plan 2 as provided under RCW 41.26.720(1)(a). The adopted rates remain in place for the ensuing biennium, subject to revision by the Legislature.

RCW 41.45.070 requires that a temporary and supplemental contribution rate increase be charged to fund the cost of benefit enhancements enacted following the adoption of the basic rates. Supplemental contribution rates are included in the basic rates at the beginning of the next contribution rate-setting cycle.

Funding Policy

Washington State relies on systematic actuarial funding to finance the on-going cost of the state retirement systems. Under this financing approach, we reduce the cost of future pension payments by the expected long-term return on invested contributions.

The state's funding policy is found in Chapter 41.45 RCW — Actuarial Funding of State Retirement Systems. It includes the following goals to:

- ◆ Provide a dependable and systematic process for funding the benefits to members and retirees of the Washington State Retirement Systems.
- ◆ Continue to fully fund LEOFF Plan 2 as provided by law.
- ◆ Establish long-term employer contribution rates that will remain a relatively predictable proportion of the future state budgets.
- ◆ Fund, to the extent feasible, all benefits over the working lives of those members so that the taxpayers who receive the benefit of those members' service pay the cost of those benefits.

The Board adopted minimum contribution rates equal to 90 percent of the normal cost rate calculated under the Entry Age Normal (EAN) actuarial cost method.

The Washington State Investment Board (WSIB) directs the investment of retirement system contributions. RCW 43.33A.110 requires WSIB to maximize investment returns at a prudent level of risk.

Comments on 2013 Results

Many factors can influence how actuarial valuation results change from one measurement date to the next. Those factors include changes in the covered population, changes in plan provisions, assumptions, and methods, and experience that varies from our expectations.

For this valuation, assumption changes explain most of the changes from last year's report. The assumed rate of investment return remained at 7.5 percent for LEOFF 2. The Board adopted our recommendation to change the projection scale we use to estimate future improvement in rates of mortality from 50 percent of Scale AA to 100 percent of Scale BB. The mortality assumption change led to lower funded status and higher contribution rates than calculated last valuation.

We observed no significant changes in the covered population and there were no changes in plan provisions. We also made no significant changes to our actuarial methods.

In terms of annual plan experience, the actual rate of investment return was 12.36 percent and above the assumed rate. The rate of investment return on the actuarial (or smoothed) value of assets was higher than expected for the plan year as well. We also observed lower than expected salary growth for the year when estimating plan liabilities.

Detailed gain and loss information by system can be found in the **Actuarial Exhibits** section of this report. Please see the **Actuarial Certification Letter** for additional comments on the 2013 valuation results.

Actuarial Liabilities

Actuarial Liabilities		
(Dollars in Millions)	2013	2012
Future Value of Fully Projected Benefits	\$85,177	\$65,782
Present Value of Fully Projected Benefits	\$10,314	\$9,203
Present Value of Accrued Benefits	\$6,859	\$6,071
Unfunded Actuarial Accrued Liability	N/A	N/A
Valuation Interest Rate	7.50%	7.50%

The table to the left summarizes key measures of actuarial liability along with the liabilities from last year's valuation. The Future Value of Fully Projected Benefits represents the total expected value of all future benefit payments for all members as of the valuation date. The Present Value of Fully Projected Benefits

represents today's value of the Future Value of Fully Projected Benefits when we discount future benefit payments with the valuation interest rate. In other words, if we invest the Present Value of Fully Projected Benefits as a lump sum amount at the valuation date and earn the valuation interest rate each year, there would be enough money to pay all future benefit payments for current members.

The Present Value of Accrued (Earned) Benefits identifies the portion of the Present Value of Future Benefits that has been "earned" as of the valuation date based on the Projected Unit Credit (PUC) actuarial cost method. The Unfunded Actuarial Accrued Liability (UAAL) represents the excess, if any, of the Present Value of Accrued Benefits at the valuation date over the Actuarial Value of Assets. In other words, the UAAL equals the present value of benefits earned at the valuation date not covered by current actuarial assets.

See the **Actuarial Exhibits** section of this report for additional information on the plan's actuarial liabilities and a disclosure of expected future benefit payments by year. Also, see the [Glossary](#) for brief explanations of the actuarial terms.

Plan Assets

The table to the right shows the Market Value of Assets and Actuarial (or smoothed) Value of Assets along with approximate rates of investment return.

To limit the volatility in contribution rates and funded status due to short-term market fluctuations, we smooth (or defer) the difference between actual and expected annual investment returns over a period not to exceed eight years. The Actuarial Value of Assets equals the Market Value of Assets less the Total Deferred Investment Gains and (Losses) at the valuation date. The Actuarial Value of Assets can never be less than 70 percent or greater than 130 percent of the Market Value of Assets.

See the **Actuarial Exhibits** section of this report for additional information on the plan's assets as well as the development of the Actuarial Value of Assets.

Assets		
(Dollars in Millions)	2013	2012
Market Value of Assets	\$7,637	\$6,640
Actuarial Value of Assets	7,862	7,222
Contributions*	272	266
Disbursements	110	91
Investment Return	825	93
Other**	\$10	\$7
Rate of Return on Assets***	12.36%	1.40%

*Employee and Employer.

**Includes transfers, restorations, payables, etc.

***This is the time-weighted rate of return on the Market Value of Assets, net of expenses. The Actuarial Value of Assets is used in determining contribution rates.

Funded Status

The funded status helps readers evaluate the health of a pension plan. A history of funded status measured consistently over a defined period helps readers evaluate a plan's funding progress over time. The funded status represents the portion of the present value of earned benefits covered by today's actuarial assets. A plan with a 100 percent funded status has one dollar in actuarial assets for each dollar of earned (or accrued) liability at the valuation date. A plan with a funded status of at least 100 percent is generally considered to be on target with its financing plan. However, a plan more/less than 100 percent funded is not automatically considered over-funded/at-risk.

We use the PUC actuarial cost method to report the funded status of the plan. The PUC method takes into account future salary and service growth for purposes of determining future benefit amounts and eligibility for those benefits, but only reflects service credit earned at the valuation date for determining earned (or accrued) benefits.

Comparing the PUC liabilities to the Actuarial Value of Assets provides an appropriate measure of a plan's funded status. Under current GASB rules, the PUC method is one of several acceptable measures of a plan's funded status. Use of another cost method could also be considered appropriate and could produce materially different results.

GASB Statements 67 and 68 become effective after June 15, 2015, replace the current GASB statements, and require use of the Entry Age Normal Cost Method (EANC) for accounting purposes. We will begin reporting the EANC funded status with the next actuarial valuation, as of June 30, 2014, to improve consistency between this funding report and future accounting disclosures.

We did not use the PUC cost method to determine contribution requirements in this valuation. Please see the **Glossary** for a more detailed explanation of PUC.

Funded Status		
(Dollars in Millions)	2013	2012
a. Present Value of Accrued Benefits	\$6,859	\$6,071
b. Market Value of Assets	\$7,637	\$6,640
c. Deferred Gains/(Losses)	(\$225)	(\$581)
d. Actuarial Value of Assets (b-c)	\$7,862	\$7,222
e. Unfunded Liability (a-d)	(\$1,003)	(\$1,150)
f. Funded Ratio (d/a)	115%	119%

Note: Totals may not agree due to rounding.

The table to the left displays the funded status for LEOFF Plan 2. We also provide a history of funded status since 1986 and funded status under alternate assumptions and methods in the **Actuarial Exhibits** section.

Participant Data

The table to the right summarizes the participant data used in the actuarial valuation for the plan year ending June 30, 2013, along with comparable information from last year's valuation. See the **Participant Data** section of this report for additional information.

Participant Data		
	2013	2012
Active Members		
Number	16,687	16,720
Total Salaries (in millions)	\$1,597	\$1,560
Average Annual Salary	\$95,694	\$93,308
Average Attained Age	43.5	43.2
Average Service	14.6	14.3
Retirees and Beneficiaries		
Number	2,782	2,344
Average Annual Benefit	\$37,812	\$34,930
Terminated Members		
Number Vested	698	689
Number "Non-Vested"	1,565	1,558

Key Assumptions

Key Assumptions	
Valuation Interest Rate	7.50%
Salary Increase	3.75%
Inflation	3.00%
Growth in Membership*	1.25%

*Applies to the LEOFF 1 funding method only.

The table to the left displays key economic assumptions used in the actuarial valuation for the plan year ending June 30, 2013. These assumptions are unchanged from our last valuation.

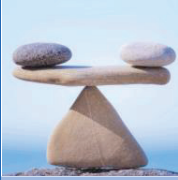
The Board adopted changes to the demographic assumptions used in this valuation. The [2007-2012 Demographic Experience Study](#), available on our website, discloses all the assumption changes from the last valuation. See the **Actuarial**

Methods and Assumptions in the Appendix for a detailed listing of assumptions used in this valuation.

Section Two

Actuarial Exhibits





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Actuarial Certification Letter Law Enforcement Officers' and Fire Fighters' Retirement System Plan 2 Actuarial Valuation Report As of June 30, 2013

October 2014

This report documents the results of an actuarial valuation of the Law Enforcement Officers' and Fire Fighters' Retirement System Plan 2 (LEOFF 2) as defined under Chapter 41.26 of the Revised Code of Washington. The primary purpose of this valuation is to determine contribution requirements for the retirement plan as of the June 30, 2013, valuation date consistent with the prescribed funding policy established by the LEOFF 2 Retirement Board (the Board). This valuation also provides information on the funding progress and developments in the plan over the past year. This valuation report should not be used for other purposes. Please replace this report with a more recent report when available.

The valuation results summarized in this report involve calculations that require assumptions about future economic and demographic events. We believe that the assumptions and methods used in the underlying valuation are reasonable and appropriate for the primary purpose stated above. The use of another set of assumptions and methods, however, could also be reasonable and could produce materially different results. Actual results may vary from our expectations.

The assumptions used in this valuation for investment return, inflation, and salary growth were adopted by the Board in the 2011 Interim. The membership growth assumption was prescribed by the Legislature. Please see our latest *Economic Experience Study* report for further information on the economic assumptions. The Board adopted updates to the demographic assumptions as part of their review of the *2007-2012 Experience Study* results and adoption of the associated contribution rates. The Legislature was responsible for the selection of the actuarial cost and asset valuation methods. In our opinion, all methods, assumptions, and calculations are reasonable and are in conformity with generally accepted actuarial principles and standards of practice as of the date of this publication.

The Department of Retirement Systems (DRS) provided us with member and beneficiary data. We checked the data for reasonableness as appropriate based on the purpose of the valuation. The Washington State Investment Board (WSIB) and DRS provided financial and asset information. An audit of the financial and participant data was not performed. We relied on all the information provided as complete and accurate. In our opinion, this information is adequate and substantially complete for purposes of this valuation.

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Actuarial Certification Letter
Page 2 of 2

The asset smoothing method adopted during the 2003 Legislative session (Chapter 11, Laws of 2003, E1) was intended to address the volatility of contribution rates under the aggregate funding method when used in combination with the existing asset allocation policy of WSIB. The combination of the current asset smoothing method with any other funding method or asset allocation policy may not be appropriate.

During the 2012 Interim, the Board adopted a stable contribution rate policy for 2013-17 to manage the risk of increasing contribution rates in the future. During the 2014 Interim, the Board reaffirmed the policy for the 2015-17 Biennium. This temporary funding policy produces contribution rates at June 30, 2013, that exceed the requirements under the plan's actuarial cost method and long-term funding policy. In our opinion, this temporary funding policy is reasonable and consistent with the Board's risk management goals. The adoption of contribution rates below the current stable rates for 2013-17 could also be reasonable, but potentially inconsistent with the Board's risk management goals.

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.

Sincerely,



Matthew M. Smith, FCA, EA, MAAA
State Actuary



Lisa A. Won, ASA, FCA, MAAA
Senior Actuary

Contribution Rates

Member and Employer Rate Summary		
	2013	2012
Member	7.97%	7.74%
Employer*	4.78%	4.64%
State (Normal Cost)	3.19%	3.10%
State (Plan 1 UAAL)	0.00%	0.00%
Total State	3.19%	3.10%

*Excludes administrative expense rate.

Development of Employer/State Rates	
	LEOFF 2
a. Total Normal Cost	15.94%
b. Employee Normal Cost (a x 50%)	7.97%
c. Total Employer/State Normal Cost (a - b)	7.97%
d. State Normal Cost (a x 20%)	3.19%
e. Employer Normal Cost (c - d)*	4.78%
f. Cost to Amortize UAAL	0.00%
g. Total Employer Contribution Rate (e + f)**	4.78%

*Excludes administrative expense rate.

**The state pays 20% of the total normal cost for LEOFF 2. This reduces the total employer contribution rate from 7.97% to 4.78%.

The tables on the following page show the development of the normal cost rates. Consistent with the Law Enforcement Officers' and Fire Fighters' (LEOFF) Plan 2 Retirement Board's (the Board) funding policy, the normal cost rates include minimum contribution rates to provide stable and adequate contribution rates over time. The minimum rates are 90 percent of the normal cost calculated under the Entry Age Normal (EAN) funding method. Please see the **Glossary** for a more detailed explanation of EAN.

Section 2: Actuarial Exhibits

Development of Normal Cost Rates	
(Dollars in Millions)	LEOFF 2
1. Calculation of Member Normal Cost Rate	
a. Future Value of Fully Projected Benefits	\$85,177
b. Present Value of Fully Projected Benefits	10,314
c. Valuation Assets	7,862
d. Unfunded Fully Projected Benefits (b - c)	2,451
e. Plan 1 Present Value of Future Salaries (PVS)	N/A
f. Plan 2 PVS	17,563
g. Weighted PVS (2e + 2f)	\$35,126
h. Employee Normal Cost (d / g)	6.98%
i. Employee Minimum Contribution Rate	7.97%
j. Employee Contribution Rate with Minimum	7.97%
k. Change In Plan Provisions (Laws of 2014)	0.00%
l. Employee Contribution Rate (j + k)	7.97%
2. Calculation of Employer/State Normal Cost Rate	
a. Present Value of Fully Projected Benefits	\$10,314
b. Valuation Assets	7,862
c. Unfunded Fully Projected Benefits (a - b)	2,451
d. Present Value of Employee Contributions	1,226
e. Employer/State Responsibility (c - d)	\$1,226
f. Plan 2 PVS	\$17,563
g. Employer/State Normal Cost (e / f)	6.98%
h. Employer/State Minimum Contribution Rate	7.97%
i. Employer/State Contribution Rate with Minimum	7.97%
j. Change In Plan Provisions (Laws of 2014)	0.00%
k. Total Employer/State Contribution Rate (i + j)	7.97%
3. Contribution Rates Adopted for 2013-17*	
a. Employee Contribution Rate**	8.41%
b. Employer Contribution Rate (a - c)**	5.05%
c. State Contribution Rate**	3.36%
d. Total Contribution Rate (a + b + c)	16.82%

Note: Totals may not agree due to rounding.

*LEOFF 2 rates adopted by the LEOFF 2 Board.

**LEOFF 2 rate: 50% Employee, 30% Employer, 20% State.

Amortization of the Plan 1 Unfunded Actuarial Accrued Liability (UAAL)	
(Dollars in Millions)	LEOFF 1
a. Future Value of Fully Projected Benefits	\$11,500
b. Present Value of Fully Projected Benefits (PVFB)	4,420
c. Valuation Assets	5,516
d. Actuarial Present Value of Future Normal Costs	0
e. UAAL (b - c - d)	(1,096)
f. Expected UAAL Contributions to 2013	0
g. Remaining UAAL (e - f)	(\$1,096)
h. Amortization Date	6/30/2024
i. Present Value of Projected Salaries beyond 2013	\$12,646
j. Preliminary Contribution Rate (g/ i)*	(8.67%)
k. Change In Plan Provisions (Laws of 2014)	0.00%
l. Contribution Rate to Amortize the UAAL (j + k)*	(8.67%)

Note: Totals may not agree due to rounding.

*No LEOFF 1 UAAL contributions are required when the plan is fully funded under current funding methods and assumptions.

Actuarial Liabilities

Present Value of Fully Projected Benefits	
(Dollars in Millions)	LEOFF 2
Active Members	
Retirement	\$7,637
Termination	144
Death	104
Disability	351
Return of Contributions on Termination	87
Return of Contributions on Death	129
Total Active	\$8,451
Inactive Members	
Terminated	\$154
Service Retired	1,517
Disability Retired	123
Survivors	69
Total Inactive	\$1,862
Laws of 2014	0
2013 Total	\$10,314
2012 Total	\$9,203

Note: Totals may not agree due to rounding.

Present Value of Accrued (Earned) Benefits*	
(Dollars in Millions)	LEOFF 2
Active Members	
Retirement	\$4,484
Termination	87
Death	70
Disability	226
Return of Contributions on Termination	52
Return of Contributions on Death	78
Total Active	\$4,997
Inactive Members	
Terminated	\$154
Service Retired	1,517
Disability Retired	123
Survivors	69
Total Inactive	\$1,862
Laws of 2014	0
2013 Total	\$6,859
2012 Total	\$6,071

Note: Totals may not agree due to rounding.

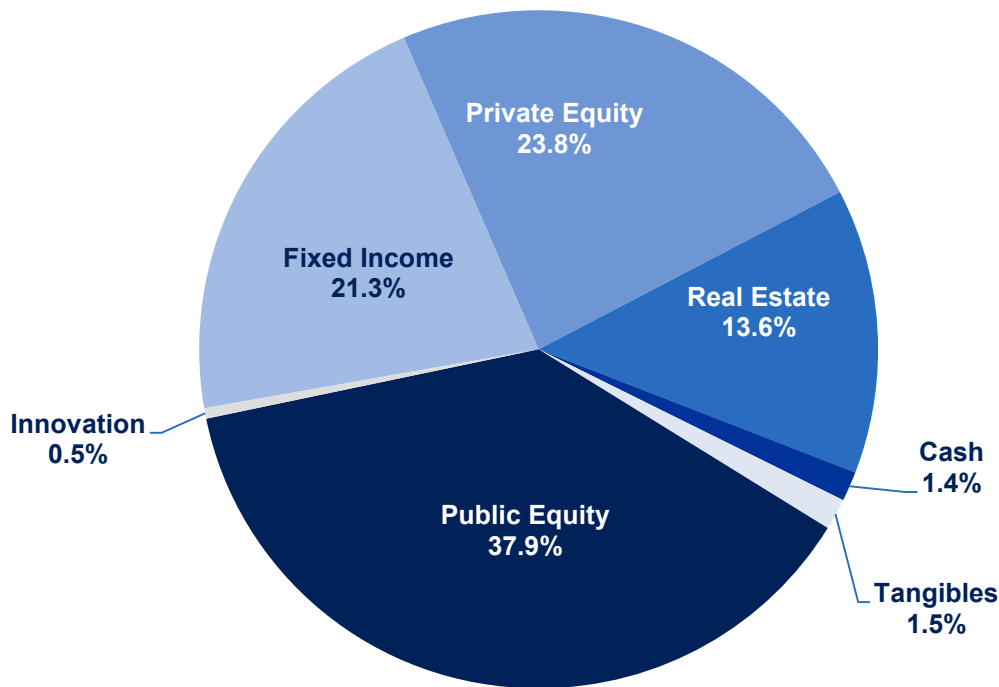
*Calculated using the PUC cost method.

This method was not used to determine contribution requirements.

Fully Projected Benefit Payments					
LEOFF - Plan 2					
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value
2013	\$140	\$135	2063	\$1,554	\$40
2014	168	151	2064	1,481	36
2015	201	168	2065	1,407	32
2016	236	184	2066	1,330	28
2017	275	199	2067	1,252	24
2018	317	213	2068	1,173	21
2019	362	226	2069	1,093	18
2020	410	239	2070	1,014	16
2021	462	250	2071	934	14
2022	518	261	2072	856	12
2023	577	270	2073	778	10
2024	639	278	2074	702	8
2025	703	285	2075	628	7
2026	771	290	2076	556	6
2027	841	295	2077	488	5
2028	913	298	2078	423	4
2029	987	299	2079	362	3
2030	1,063	300	2080	306	2
2031	1,140	299	2081	255	2
2032	1,218	297	2082	209	1
2033	1,297	295	2083	169	1
2034	1,376	291	2084	134	1
2035	1,454	286	2085	105	1
2036	1,531	280	2086	80	0
2037	1,606	273	2087	61	0
2038	1,678	265	2088	45	0
2039	1,747	257	2089	33	0
2040	1,812	248	2090	23	0
2041	1,871	238	2091	16	0
2042	1,925	228	2092	11	0
2043	1,973	217	2093	8	0
2044	2,014	206	2094	5	0
2045	2,049	195	2095	3	0
2046	2,076	184	2096	2	0
2047	2,095	173	2097	1	0
2048	2,108	162	2098	1	0
2049	2,113	151	2099	1	0
2050	2,111	140	2100	0	0
2051	2,101	130	2101	0	0
2052	2,085	120	2102	0	0
2053	2,063	110	2103	0	0
2054	2,035	101	2104	0	0
2055	2,000	93	2105	0	0
2056	1,960	84	2106	0	0
2057	1,915	77	2107	0	0
2058	1,865	69	2108	0	0
2059	1,811	63	2109	0	0
2060	1,752	56	2110	0	0
2061	1,689	51	2111	0	0
2062	\$1,623	\$45	2112	\$0	\$0
			Total	\$85,177	\$10,314

Plan Assets

Retirement Commingled Trust Fund (CTF) Asset Allocation



Cash: Highly liquid, very safe investments that can be easily converted into cash, such as Treasury Bills and money-market funds.

Fixed Income: Securities representing debt obligations and usually having fixed payments and maturities. Different types of fixed income securities include government and corporate bonds, mortgage-backed securities, asset-backed securities, convertible issues, and may also include money-market instruments.

Innovation: Fund that provides the ability to invest in a broad range of assets that fall outside the traditional asset classes or management style of existing asset classes.

Public Equity: Shares of U.S. and non-U.S. corporations that trade on public exchanges or “over-the-counter.” The ownership of a corporation is represented by shares that are claimed on the corporation’s earnings and assets.

Private Equity: The infusion of equity capital into a private company (one that is not available on the public markets). Private equity investments include securities that are not listed on a public exchange and are not easily accessible to most individuals. These investments range from initial capital in start-up enterprises to leveraged buyouts of mature corporations.

Real Estate: An externally-managed selection of partnership investments with the majority of the partnerships invested in high-quality real estate leased to third parties.

Tangibles: The tangible asset portfolio invests in sectors such as infrastructure, timber, agriculture, natural resources, commodities, or other sectors consistent with the goals of the asset class.

Section 2: Actuarial Exhibits

Change in Market Value of Assets	
(Dollars in Millions)	LEOFF 2
2012 Market Value	\$6,640
Revenue	
Contributions	
Employee	136
Employer/State	137
Total Contributions	272
Investment Return	825
Restorations	8
Transfers In	2
Miscellaneous	0
Total Revenue	\$1,107
Disbursements	
Monthly Benefits	101
Refunds	9
Total Benefits	109
Transfers Out	0
Expenses	1
Total Disbursements	\$110
Payables	\$0
2013 Market Value	\$7,637
2013 Actuarial Value	\$7,862
Ratio (AV/MV)	103%

Note: Totals may not agree due to rounding.

Calculation of Actuarial Value of Assets			
(Dollars in Millions)	LEOFF 2		
a. Market Value at 6/30/2013			\$7,637
b. Deferred Gains and (Losses)			
Plan Year Ending	Years Deferred	Years Remaining	
6/30/2013	5	4	257
6/30/2012	7	5	(278)
6/30/2011	8	5	437
6/30/2010	5	1	44
6/30/2009	8	3	(620)
6/30/2008	8	2	(123)
9/30/2007	8	1	58
Total Deferral			(\$225)
c. Market Value less Deferral (a - b)			\$7,862
d. 70% of Market Value of Assets			\$5,346
e. 130% of Market Value of Assets			\$9,929
f. Actuarial Value of Assets*			\$7,862

Note: Totals may not agree due to rounding.

*Actuarial Value of Assets can never be less than 70% or greater than 130% of the market value of assets.

Investment Gains and (Losses) for Prior Year	
(Dollars in Millions)	LEOFF 2
a. 2012 Market Value (at WSIB)	\$6,620
b. Total Cash Flow	172
c. 2013 Market Value (at WSIB)	7,617
d. Actual Return (c - b - a)	\$826
e. Weighted Asset Amount	\$6,693
f. Expected Return (7.5% x e)	502
g. Investment Gain/(Loss) for Prior Year (d - f)	322
h. Dollar-Weighted Rate of Return	12.31%

Note: Totals may not agree due to rounding.

Funded Status

We report a plan's funded status by comparing the plan's current assets to the present value of earned pensions of its members. A plan's funded status can vary significantly, depending on the assumptions and methods used to determine the value of the plan's assets and liabilities. For this valuation report, we present two funded status measures.

The first funded status measure compares the Actuarial Value of Assets (AVA) to the Projected Unit Credit (PUC) liabilities calculated using a long-term interest assumption. The second measure compares the Market Value of Assets (MVA) to the PUC liabilities calculated using a short-term interest assumption. The next sections describe these measures in more detail and display the resulting funded status for the plan. Please see the **Glossary** for an explanation of the PUC actuarial cost method.

We include information for LEOFF Plan 1 because the prior funding policy required the state to amortize any LEOFF 1 Unfunded Actuarial Accrued Liability (UAAL) not later than June 30, 2024, using projected salaries of both LEOFF 1 and LEOFF 2 members.

Funded Status on an Actuarial Value Basis

We report the funded status on an actuarial value basis as the ratio of the AVA to the PUC liability calculated using the 7.50 percent valuation interest rate assumption. We assume the plan is on-going and, therefore, we use the same long-term assumptions to develop the liabilities as we used for determining the contribution requirements of the plan. We don't expect the assumptions to match actual experience over short-term periods. However, we do expect these assumptions to reasonably approximate average annual experience over long-term periods. This measure of funded status is consistent with the state's current funding policy and financing plan for future retirement benefits.

We use an asset valuation method to determine the AVA. This asset valuation method smooths the inherent volatility in the MVA by deferring a portion of annual investment gains or losses for a certain number of years. Investment gains and losses occur when the annual return on investments varies from the long-term assumed rate of 7.5 percent. The AVA provides a more stable measure of the plan's assets on an on-going basis.

We use the PUC actuarial cost method to determine the present value of earned pensions. The PUC liabilities are actuarial liabilities based on members' earned service credit as of the valuation date. They include future assumed salary increases and reflect future service credits for determining benefit eligibility. The PUC liabilities are discounted to the valuation date using the valuation interest rate to

determine the present value (today's value). The valuation interest rate is consistent with the long-term expected return on invested contributions.

Comparing the PUC liabilities to the AVA provides an appropriate measure of a plan's funded status. Under current Governmental Accounting Standards Board (GASB) statements, the PUC method is one of several acceptable measures of a plan's funded status. Use of another cost method could also be considered appropriate and could produce materially different results. A plan with a funded status under this measurement of at least 100 percent is generally considered to be on target with its financing plan. However, a plan more/less than 100 percent funded is not automatically considered over-funded/at-risk.

GASB Statements 67 and 68 become effective after June 15, 2015, replace the current GASB statements, and require use of the Entry Age Normal Cost Method (EANC) for accounting purposes. We will begin reporting the EANC funded status with the next actuarial valuation report, as of June 30, 2014.

The table below displays the funded status on an actuarial value basis for LEOFF.

Funded Status on an Actuarial Value Basis*			
(Dollars in Millions)		LEOFF 2	LEOFF 1
PUC Liability		\$6,859	\$4,410
Valuation Assets		\$7,862	\$5,516
Unfunded Liability		(\$1,003)	(\$1,107)
Funded Ratio			
	2013 **	115%	125%
	2012	119%	135%
	2011 **	119%	135%
	2010 **	119%	127%
	2009 **	128%	125%
	2008 **	133%	128%
	2007 **	129%	123%
	2006 **	116%	117%
	2005 **	114%	114%
	2004	117%	109%
	2003	125%	112%
	2002	137%	119%
	2001 **	154%	129%
	2000 **	161%	136%
	1999	154%	125%
	1998	160%	117%
	1997 **	155%	108%
	1996	130%	89%
	1995	126%	80%
	1994 **	124%	68%
	1993	127%	68%
	1992	128%	65%
	1991	154%	66%
	1990	153%	65%
	1989 **	158%	65%
	1988	153%	66%
	1987	157%	69%

Note: Totals may not agree due to rounding. See the 2013 AVR for development of LEOFF 1 values.

**Liabilities valued using the PUC cost method at an interest rate of 7.5% for LEOFF 2, 7.8% for LEOFF 1. All assets have been valued under the actuarial asset method.*

***Assumptions changed.*

The present value of actuarial liabilities is sensitive to the interest rate assumption. The following tables show how the funded status changes when we use different interest rate assumptions. We calculated liabilities using varying interest rates to show this sensitivity.

Funded Status at a 1% Lower Interest Rate Assumption*			
(Dollars in Millions)		LEOFF 2	LEOFF 1
PUC Liability		\$8,212	\$4,844
Valuation Assets		\$7,862	\$5,516
Unfunded Liability		\$349	(\$673)
Funded Ratio			
	2013	96%	114%
	2012	100%	124%
	2011	100%	123%
	2010	99%	116%
	2009	107%	114%
	2008	111%	117%

Note: Totals may not agree due to rounding. See the 2013 AVR for development of LEOFF 1 values.

*Liabilities valued using the PUC cost method at an interest rate of 6.5% for LEOFF 2, 6.8% for LEOFF 1. All assets have been valued under the actuarial asset method.

Funded Status at a 1% Higher Interest Rate Assumption*			
(Dollars in Millions)		LEOFF 2	LEOFF 1
PUC Liability		\$5,808	\$4,039
Valuation Assets		\$7,862	\$5,516
Unfunded Liability		(\$2,054)	(\$1,477)
Funded Ratio			
	2013	135%	137%
	2012	140%	146%
	2011	140%	146%
	2010	141%	139%
	2009	152%	137%
	2008	159%	141%

Note: Totals may not agree due to rounding. See the 2013 AVR for development of LEOFF 1 values.

*Liabilities valued using the PUC cost method at an interest rate of 8.5% for LEOFF 2, 8.8% for LEOFF 1. All assets have been valued under the actuarial asset method.

Funded Status on a Market Value Basis

We report the funded status on a market value basis as the ratio of the MVA to the PUC liability calculated using a 5 percent interest rate assumption. The funded status on a market value basis provides a measure of the plan's health if the plan is "settled" or "immunized" on the valuation date. Immunizing a pension plan means attaching assets to liabilities so the assets maturing each year match the expected pension payments due from the pension plan each year. A plan can be settled by purchasing annuities on the open market for each member, or immunized by investing the assets in bonds with payment streams that match the expected benefit payments. Expected benefit payments would include growth for future salary inflation, which is why we have used the PUC liability measure instead of a purely accrued liability measure.

Because LEOFF 2 is open and on-going, we only present the market value funded status for the closed LEOFF 1. Although LEOFF 1 is closed to new members, it is not settled and has not been immunized. However, there is an opportunity to immunize the plan in the future. LEOFF 1 is considered an on-going plan because current annuitants continue to receive their benefits from the retirement trust fund, and current active members continue to accrue benefits under the plan. However, because the plan is closed to new members, the future benefit payments are more predictable, have a shorter duration, and would be easier to immunize. The decision to settle or immunize LEOFF 1 is complex and would require additional actuarial analysis and information that is outside the scope of this report.

The following table displays the market value funded status for LEOFF 1 as described above.

Funded Status on a Market Value Basis*	
(Dollars in Millions)	LEOFF 1
Projected Unit Credit Liability	\$5,840
Market Value of Assets	\$5,140
Unfunded Liability	\$701
Funded Ratio	
2013	88%
2012	91%
2011	95%
2010	82%
2009	76%
2008	107%
2007	114%
2006	102%
2005	94%

Note: Totals may not agree due to rounding.

**Liabilities have been valued using an interest rate of 5% while assets are their market value. The 5% interest rate approximates the "risk-free" rate of return on assets while maintaining consistency with the 3% inflation assumption used to project future benefit payments. This method was not used to determine contribution requirements. Prior to 2011, liabilities were valued at 5.5%.*

Both funded status measures vary based on the measurement (valuation) date and the market conditions on that date. The market value measure, however, is more volatile because the asset value has no smoothing and the ability to immunize the plan depends on current bond and annuity purchase rates.

Actuarial Gains/Losses

The next three tables display actuarial gains and losses, expressed as contribution rate changes. Actuaries use gain/loss analysis to compare actual changes to assumed changes in assets, liabilities, and salaries from various sources. We also use this analysis to determine:

- ◆ The accuracy of our valuation model and annual processing.
- ◆ Why contribution rates changed.
- ◆ The reasonableness of the actuarial assumptions.

Actuarial gains will reduce contribution rates; actuarial losses will increase contribution rates. Under a reasonable set of actuarial assumptions, actuarial gains and losses will offset over long-term experience periods.

Change in State Contribution Rate by Source*	
Change in Employer Rate	LEOFF
2012 Contribution Rate Before Laws of 2013	(8.79%)
Remove Rate Floor / Ceiling	(0.74%)
LEOFF 1 Funding Method Changes	0.34%
2012 Adjusted Contribution Rate	(9.19%)
Liability Gains/Losses	0.04%
Asset Gains/Losses	0.89%
Present Value of Future Salaries Gains/Losses	(0.40%)
Incremental Changes	2.98%
Other Gains/Losses	(0.20%)
Total Change	3.31%
2013 Preliminary Contribution Rate	(5.88%)
Increase from Applied Rate Floor	0.40%
Laws of 2014	0.00%
2013 Adjusted Contribution Rate	(5.48%)

*The LEOFF contribution rate is the State's portion for Plan 2 (20% of the Normal Cost) plus the UAAL rate for Plan 1.

Change in Normal Cost by Source*	
Change in Normal Costs	LEOFF 2
2012 Normal Cost Before Laws of 2013	3.10%
Remove Rate Floor / Ceiling	(0.74%)
2012 Adjusted Normal Cost Rate	2.36%
Liabilities	
Salaries	(0.14%)
Termination	0.00%
Retirement	(0.01%)
Growth / Return to Work	0.16%
Other Liabilities	0.04%
Total Liability Gains/Losses	0.05%
Asset Gains/Losses	(0.02%)
Present Value of Future Salaries Gains/Losses	(0.06%)
Incremental Changes	
Plan Change	0.00%
Method Change	0.00%
Assumption Change	0.00%
Correction Change	0.00%
Experience Study Change	0.43%
Total Incremental Changes Gains/Losses	0.43%
Other Gains/Losses	0.03%
Total Change	0.43%
2013 Preliminary Normal Cost	2.79%
Increase from Applied Rate Floor	0.40%
Laws of 2014	0.00%
2013 Adjusted Normal Cost	3.19%

*The LEOFF 2 contribution rate is the State's portion for Plan 2 (20% of the Normal Cost) .

Change in State UAAL Rate by Source*	
Change in UAAL Rate	LEOFF 1
2012 UAAL Rate Before Laws of 2013	(11.89%)
Remove Rate Floor / Ceiling	0.00%
LEOFF 1 Roll Forward Funding Method	0.34%
2012 Adjusted UAAL Rate	(11.55%)
Liabilities	
Salaries	(0.03%)
Termination	0.00%
Retirement	(0.02%)
Return to Work	0.00%
Inflation (CPI)	(0.14%)
Other Liabilities	0.18%
Total Liability Gains/Losses	(0.01%)
Asset Gains/Losses	0.91%
Present Value of Future Salaries Gains/Losses	(0.34%)
Incremental Changes	
Plan Change	0.00%
Method Change	0.00%
Assumption Change	0.29%
Correction Change	0.00%
Experience Study Change	2.26%
Total Incremental Changes Gains/Losses	2.55%
Other Gains/Losses	(0.23%)
Total Change	2.88%
2013 Preliminary UAAL Rate	(8.67%)
Laws of 2014	0.00%
2013 Adjusted UAAL Rate	(8.67%)

*The contribution rate is the UAAL rate for plan 1. No contributions are required under current law when the plan remains fully funded.

Effect of Plan, Assumption, and Method Changes

In addition to experience gains or losses, changes in plan provisions or actuarial assumptions or methods can also impact contribution rates.

Plan Changes

- ◆ None.

Assumption Changes

- ◆ For LEOFF 1, we lowered the assumed long-term rate of return from 7.9 percent to 7.8 percent.
- ◆ We updated assumed administrative factors.
- ◆ We updated demographic assumptions as a result of the *2007-2012 Experience Study*.

Method Changes

- ◆ None.

Effect of Changes on the Current Valuation

The following table shows the effect of the above changes on the current actuarial valuation report results.

Effect of Plan, Assumption, and Method Changes	
Before Changes	LEOFF 2
PVFB	\$9,814
PUC Liability	6,655
Actuarial Value of Assets	7,862
Unfunded Liability	(1,208)
Employer Contribution Rate*	4.64%
After Changes	
PVFB	\$10,314
PUC Liability	6,859
Actuarial Value of Assets	7,862
Unfunded Liability	(1,003)
Employer Contribution Rate*	4.78%
Increase/(Decrease) in Rate	0.14%

Before and after changes include actuarial gains and losses for the year ending 6/30/2013.

Both before and after contribution rates include rate minimums.

**The contribution rate is the Employer's portion only (30% of the Plan 2 Normal Cost).*

Section Three

Participant Data



Overview of System Membership

Law Enforcement Officers' and Fire Fighters' (LEOFF) Retirement System Plan 2 (Chapter 41.26 RCW).

Membership includes fire fighters; emergency medical technicians; law enforcement officers including sheriffs; university, port, and city police officers; and Department of Fish and Wildlife enforcement officers.

Active Membership By Employer	
State Agencies	124
Higher Education	110
Community Colleges	0
K-12	0
Counties	2,753
County Sub Divisions	211
First Class Cities	4,890
Other Cities	4,911
Ports	173
Education Service District	0
Fire Districts	3,515
Public Utility District	0
Water Districts	0
Energy Northwest	0
Unions	0
TOTAL	16,687

The following table summarizes participant data changes from last year's valuation to this year's valuation. We divide the participant data into two main categories.

- ♦ **Actives** – members accruing benefits in the plan.
- ♦ **Annuitants** – members and beneficiaries receiving benefits from the plan.

Reconciliation of Participant Data	
2012 Actives	16,720
Transfers	0
Hires/Rehires	612
New Retirees	(366)
Deaths	(11)
Terminations	(268)
2013 Actives	16,687
2012 Annuitants	2,344
New Retirees	441
Annuitant Deaths	(16)
New Survivors	16
Other	(3)
2013 Annuitants	2,782
Ratio of Actives to Annuitants	6.00

Summary of Plan Participants

Summary of Plan Participants		
	2013	2012
Active Members		
Number	16,687	16,720
Total Salaries (Millions)	\$1,597	\$1,560
Average Age	43.5	43.2
Average Service	14.6	14.3
Average Salary	\$95,694	\$93,308
Terminated Members		
Number Vested	698	689
Number "Non-Vested"	1,565	1,558
Retirees		
Number of Retirees (All)	2,782	2,344
Average Monthly Benefit, All Retirees	\$3,151	\$2,911
Number of New "Service Retirees"	402	323
Average Monthly Benefit, New "Service Retirees"	\$4,091	\$3,970

Section Four

Appendices



Actuarial Methods and Assumptions

To calculate the contribution rates necessary to pre-fund the plan's benefits, an actuary uses an actuarial cost method, asset valuation method, economic assumptions, and demographic assumptions.

Actuarial Cost Methods

The future benefit obligations (or costs of the plan) are spread over the working lifetimes of the plan members based on the actuarial cost method (or funding method) in place for the plan. This produces a future stream of contributions to pre-fund the plan's benefits. Different cost methods pre-fund plans at different rates. Some put more money in earlier whereas others put more money in later.

Actuarial cost methods generally have two parts, which serve to:

- ◆ Fund future benefits in a consistent manner from year to year.
- ◆ Make up for any shortfalls in prior funding, including differences in funding when experience differs from assumptions.

The two parts of an actuarial cost method are:

- ◆ **The Normal Cost** — the value of future benefits allocated to the current plan year under the actuarial cost method.
- ◆ **Amortization of the Unfunded Actuarial Accrued Liability (UAAL)** — where the UAAL represents the amount of past service liability that exceeds the value of the plan's assets.

The Legislature was responsible for the selection of the actuarial cost and asset valuation methods. The actuarial cost methods used for the Law Enforcement Officers' and Fire Fighters' (LEOFF) Retirement System are as follows.

LEOFF Plan 1: A variation of the Frozen Initial Liability Cost Method is used to determine the normal cost and the actuarial accrued liability for retirement, termination, and ancillary benefits. Under this method, the UAAL is equal to the unfunded actuarial present value of projected benefits less the actuarial present value of future normal costs for all active members and is reset at each valuation date. The present value of future normal costs is based on the Aggregate normal cost rate for Plan 2 and the resulting UAAL is amortized by June 30, 2024, as a level percentage of projected system payroll. The projected payroll includes pay from Plan 2 as well as projected payroll from future new entrants.

LEOFF Plan 2: We use the Aggregate Cost Method to determine the normal cost and the actuarial accrued liability. Under this method, the unfunded actuarial present value of fully projected benefits is amortized over the future payroll of the active group. Members pay 50 percent of the total normal cost. The entire contribution is considered normal cost and no UAAL exists.

We use the Projected Unit Credit (PUC) cost method to report the plan's funded status. The PUC cost method projects future benefits under the plan, using salary growth and other assumptions, and applies the service that has been earned as of the valuation date to determine accrued liabilities. Comparing the PUC liabilities to the actuarial value of assets on the valuation date provides an appropriate measure of a plan's funded status. Under current Governmental Accounting Standards Board (GASB) rules, the PUC method is one of several acceptable measures of a plan's funded status. Use of another cost method could also be considered appropriate and could produce materially different results. Please see the **Glossary** for a further explanation of the PUC cost method.

Section 4: Appendices

GASB Statements 67 and 68 become effective after June 15, 2015, replace the current GASB statements, and require use of the Entry Age Normal Cost Method (EANC) for accounting purposes. We will begin reporting the EANC funded status with the next actuarial valuation, as of June 30, 2014.

We use the plan's assets to calculate contribution rates, unfunded liabilities, and the plan's funded status. Because the market value of assets can be volatile from one year to the next, an asset valuation method is generally used to adjust the Market Value of Assets (MVA) and smooth the effects of short-term volatility. The adjusted assets are called the Actuarial Value of Assets (AVA), or valuation assets.

Annual Gain/Loss		
Rate of Return	Smoothing Period	Annual Recognition
14.5% and up	8 years	12.50%
13.5-14.5%	7 years	14.29%
12.5-13.5%	6 years	16.67%
11.5-12.5%	5 years	20.00%
10.5-11.5%	4 years	25.00%
9.5-10.5%	3 years	33.33%
8.5-9.5%	2 years	50.00%
6.5-8.5%	1 year	100.00%
5.5-6.5%	2 years	50.00%
4.5-5.5%	3 years	33.33%
3.5-4.5%	4 years	25.00%
2.5-3.5%	5 years	20.00%
1.5-2.5%	6 years	16.67%
0.5-1.5%	7 years	14.29%
0.5% and lower	8 years	12.50%

For this valuation, we calculate the AVA using an asset smoothing method. This smoothing method was adopted during the 2003 Legislative Session. Each year, beginning with the application of this smoothing method, we determine the amount the actual investment return exceeds (or falls below) the expected investment return and we smooth that year's gain (or loss) based on the scale in the table above.

Additionally, to ensure the AVA maintains a reasonable relationship to the MVA, a 30 percent corridor is in place. This means the AVA may not exceed 130 percent nor drop below 70 percent of the MVA in any valuation.

Economic Assumptions

Economic Assumptions	
Annual Growth in Membership	1.25%
Interest on Member Contributions ¹	5.50%
Return on Investment Earnings ²	7.50%
Inflation ³	3.00%
General Salary Increases (includes inflation) ⁴	3.75%
Annual COLA ⁵	3.00%

¹Annual rate, compounded quarterly.

²Annual rate, compounded annually, net of expenses

³Based on the CPI: Urban Wage Earners & Clerical Workers, Seattle-Tacoma-Bremerton, WA - All Items.

⁴Excludes longevity, merit or step increases that usually apply to members in the early part of their careers.

⁵Based on the CPI (3% maximum per year).

These generally include the annual rate of return on plan assets, annual rate of inflation, and annual rate of salary growth. The economic assumptions used in this actuarial valuation are prescribed by the Legislature and the LEOFF Plan 2 Retirement Board and are shown in the table to the left.

Demographic Assumptions

These include rates of retirement, rates at which members become disabled, turnover rates, mortality rates, and several other demographic assumptions as disclosed later in this section.

Changes in Methods and Assumptions since the Last Valuation

We changed the methods we use to value liabilities in the following ways.

- ◆ For LEOFF 1, we assume a 7.8 percent interest rate.
- ◆ We updated assumed administrative factors consistent with those currently in use by the Department of Retirement Systems.
- ◆ We performed an experience study of the plans for the period 2007-2012. As a result of this study, we updated demographic assumptions. For a full description of the assumption changes see the *2007-2012 Experience Study Report*.

Our mortality rates include an assumption for future mortality improvements. We took two steps to build our mortality assumptions.

First, we developed the base mortality table by starting with RP-2000, published by the Society of Actuaries, and applied age offsets for each plan. When age offsets are negative, it means we think people of a given age are generally healthier than others their age. In other words, we expect their mortality experience will be similar to younger people. Conversely, a positive age offset means we expect mortality experience for a given age to match that of a higher age in the general population. For instance, we expect a 50-year-old LEOFF male to have the same mortality rate as other 49-year-old males because we assume a negative one-year age offset.

Next, we applied mortality improvements to the RP-2000 mortality table using Scale BB. Beginning with the 2013 Actuarial Valuation Report, we use “generational” mortality instead of projecting to a given year. Under generational mortality, a member is assumed to receive additional mortality improvements in each future year, throughout their lifetime.

As an example of generational mortality, consider a healthy LEOFF Plan 2 male, age 50. To project the RP-2000 mortality rates to the valuation year 2013, we use the following equation.

$$\text{RP-2000 rate} \times (1 - \text{Scale BB})^{13}$$

For a 50-year-old male, this is $0.001995 \times (1 - 0.003)^{13} = 0.001919$.

The next tables show the age offsets we used as well as the mortality rates projected to the current valuation year for each plan. Please note that this table is meant to be an example only. Under generational mortality, the mortality rate for each age will improve in each future year by the rates in the mortality improvement table.

Following these tables, the next table shows Scale BB, which was published by the Society of Actuaries.

Please see the *2007-2012 Experience Study* for more details regarding the development of these rates.

Mortality Projected to 2013			Disabled Mortality Projected to 2013			
Offsets	LEOFF			LEOFF		
	All Plans		Plan 1*		Plan 2	
	-1	1	2	2	0	0
Age	Male	Female	Male	Female	Male	Female
20	0.000318	0.000185	0.000352	0.000187	0.021706	0.007165
21	0.000332	0.000187	0.000359	0.000189	0.021706	0.007165
22	0.000343	0.000189	0.000362	0.000193	0.021706	0.007165
23	0.000352	0.000193	0.000362	0.000199	0.021706	0.007165
24	0.000359	0.000199	0.000364	0.000206	0.021706	0.007165
25	0.000362	0.000206	0.000367	0.000214	0.021706	0.007165
26	0.000362	0.000214	0.000378	0.000226	0.021706	0.007165
27	0.000364	0.000226	0.000396	0.000239	0.021706	0.007165
28	0.000367	0.000239	0.000427	0.000254	0.021706	0.007165
29	0.000378	0.000254	0.000480	0.000295	0.021706	0.007165
30	0.000396	0.000295	0.000540	0.000337	0.021706	0.007165
31	0.000427	0.000337	0.000607	0.000379	0.021706	0.007165
32	0.000480	0.000379	0.000675	0.000418	0.021706	0.007165
33	0.000540	0.000418	0.000743	0.000457	0.021706	0.007165
34	0.000607	0.000457	0.000809	0.000494	0.021706	0.007165
35	0.000675	0.000494	0.000869	0.000533	0.021706	0.007165
36	0.000743	0.000533	0.000927	0.000575	0.021706	0.007165
37	0.000809	0.000575	0.000982	0.000623	0.021706	0.007165
38	0.000869	0.000623	0.001038	0.000679	0.021706	0.007165
39	0.000927	0.000679	0.001098	0.000744	0.021706	0.007165
40	0.000982	0.000744	0.001168	0.000819	0.021706	0.007165
41	0.001038	0.000819	0.001249	0.000901	0.021706	0.007165
42	0.001098	0.000901	0.001343	0.000990	0.021706	0.007165
43	0.001168	0.000990	0.001450	0.001081	0.021706	0.007165
44	0.001249	0.001081	0.001554	0.001176	0.021706	0.007165
45	0.001343	0.001176	0.001668	0.001275	0.021706	0.007165
46	0.001450	0.001275	0.001789	0.001379	0.022934	0.007871
47	0.001554	0.001379	0.001919	0.001491	0.024162	0.008616
48	0.001668	0.001491	0.002056	0.001612	0.025393	0.009401
49	0.001789	0.001612	0.002355	0.001781	0.026626	0.010227
50	0.001919	0.001781	0.002565	0.001941	0.027865	0.011093
51	0.002056	0.001941	0.002804	0.002122	0.029109	0.011999
52	0.002355	0.002122	0.003074	0.002331	0.030354	0.012941
53	0.002565	0.002331	0.003485	0.002613	0.031600	0.013911
54	0.002804	0.002579	0.004039	0.002933	0.032844	0.014710

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

*LEOFF 1 uses RP-2000 Healthy mortality table as its base.

Mortality Projected to 2013 (Continued)			Disabled Mortality Projected to 2013 (Continued)			
LEOFF			LEOFF			
All Plans			Plan 1*		Plan 2	
Offsets	-1	1	2	2	0	0
Age	Male	Female	Male	Female	Male	Female
55	0.003074	0.002895	0.004513	0.003259	0.034084	0.015500
56	0.003485	0.003216	0.005071	0.003628	0.035325	0.016274
57	0.003987	0.003581	0.005643	0.004053	0.036095	0.017026
58	0.004397	0.004001	0.006321	0.004554	0.036853	0.017756
59	0.004876	0.004494	0.007098	0.005169	0.037608	0.018465
60	0.005426	0.005102	0.007993	0.005842	0.038373	0.019164
61	0.006078	0.005765	0.009019	0.006624	0.039163	0.019864
62	0.006825	0.006537	0.010029	0.007367	0.039993	0.020582
63	0.007684	0.007367	0.011177	0.008296	0.040878	0.021619
64	0.008671	0.008296	0.012479	0.009363	0.041837	0.022736
65	0.009642	0.009363	0.013740	0.010396	0.042886	0.023955
66	0.010745	0.010396	0.015076	0.011492	0.044046	0.025296
67	0.011996	0.011492	0.016486	0.012702	0.045331	0.026775
68	0.013208	0.012702	0.018245	0.014310	0.046758	0.028407
69	0.014683	0.014310	0.020187	0.015880	0.048979	0.030203
70	0.016270	0.015880	0.022415	0.017663	0.051419	0.032169
71	0.018245	0.017663	0.024967	0.019634	0.054096	0.034310
72	0.020187	0.019634	0.027853	0.021760	0.057025	0.036627
73	0.022415	0.021760	0.031085	0.024024	0.060218	0.039121
74	0.024967	0.024024	0.034647	0.026468	0.063685	0.041793
75	0.027853	0.026468	0.038539	0.029151	0.067428	0.044644
76	0.031085	0.029151	0.042825	0.032134	0.071441	0.047676
77	0.034647	0.032134	0.047594	0.035477	0.075711	0.050896
78	0.038539	0.035477	0.052886	0.039215	0.080223	0.054315
79	0.042825	0.039215	0.059190	0.043404	0.084949	0.057946
80	0.047594	0.043404	0.066129	0.048117	0.089862	0.061809
81	0.052886	0.048117	0.073714	0.053427	0.094933	0.065931
82	0.059190	0.053427	0.081980	0.059420	0.100137	0.070344
83	0.066129	0.059420	0.091000	0.066197	0.105449	0.075080
84	0.073714	0.066197	0.100892	0.073830	0.110855	0.080171
85	0.081980	0.073830	0.111776	0.082344	0.116344	0.085649
86	0.091000	0.082344	0.123728	0.091717	0.121907	0.091543
87	0.102232	0.091717	0.138550	0.101847	0.129238	0.097879
88	0.114762	0.101847	0.154718	0.112555	0.136816	0.104676
89	0.128717	0.112555	0.170753	0.123601	0.144652	0.111949

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

*LEOFF 1 uses RP-2000 Healthy mortality table as its base.

Mortality Projected to 2013 (Continued)			Disabled Mortality Projected to 2013 (Continued)			
LEOFF			LEOFF			
All Plans			Plan 1*		Plan 2	
Offsets	-1	1	2	2	0	0
Age	Male	Female	Male	Female	Male	Female
90	0.144131	0.125237	0.187595	0.136508	0.158844	0.121292
91	0.160944	0.138313	0.205043	0.149559	0.175301	0.131363
92	0.177617	0.151534	0.222895	0.162529	0.192587	0.142191
93	0.195128	0.164674	0.240969	0.175223	0.210494	0.153534
94	0.213269	0.177533	0.259127	0.187455	0.228814	0.166845
95	0.231828	0.189924	0.277287	0.199043	0.247362	0.179872
96	0.250616	0.201662	0.295405	0.209819	0.265995	0.192423
97	0.269491	0.212577	0.313442	0.219639	0.284628	0.204312
98	0.284628	0.219639	0.327063	0.225411	0.299288	0.212577
99	0.303218	0.228371	0.344891	0.235455	0.317558	0.222524
100	0.317558	0.235455	0.357447	0.244749	0.331358	0.228371
101	0.335704	0.247960	0.373200	0.259209	0.349415	0.238544
102	0.349415	0.259209	0.381932	0.271886	0.362136	0.247960
103	0.366882	0.275449	0.392744	0.289328	0.378090	0.262606
104	0.378090	0.289328	0.394831	0.303833	0.386937	0.275449
105	0.392003	0.307811	0.400000	0.322725	0.397886	0.293116
106	0.397886	0.322725	0.400000	0.337441	0.400000	0.307811
107	0.400000	0.337441	0.400000	0.351544	0.400000	0.322725
108	0.400000	0.351544	0.400000	0.364617	0.400000	0.337441
109	0.400000	0.364617	0.400000	0.376246	0.400000	0.351544
110	0.400000	0.376246	0.400000	0.386015	0.400000	0.364617
111	0.400000	0.386015	0.400000	0.393507	0.400000	0.376246
112	0.400000	0.393507	0.400000	0.398308	0.400000	0.386015
113	0.400000	0.398308	0.400000	0.400000	0.400000	0.393507
114	0.400000	0.400000	0.400000	0.400000	0.400000	0.398308
115	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	1.000000	1.000000	0.400000	0.400000
119	0.400000	1.000000	1.000000	1.000000	0.400000	0.400000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

*LEOFF 1 uses RP-2000 Healthy mortality table as its base.

100% Scale BB Mortality Improvement								
Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.0030	0.0030	50	0.0030	0.0030	80	0.0150	0.0120
21	0.0030	0.0030	51	0.0030	0.0030	81	0.0150	0.0120
22	0.0030	0.0030	52	0.0030	0.0030	82	0.0150	0.0120
23	0.0030	0.0030	53	0.0030	0.0030	83	0.0150	0.0120
24	0.0030	0.0030	54	0.0030	0.0040	84	0.0150	0.0120
25	0.0030	0.0030	55	0.0030	0.0050	85	0.0150	0.0120
26	0.0030	0.0030	56	0.0030	0.0060	86	0.0150	0.0120
27	0.0030	0.0030	57	0.0040	0.0070	87	0.0140	0.0120
28	0.0030	0.0030	58	0.0050	0.0080	88	0.0130	0.0120
29	0.0030	0.0030	59	0.0060	0.0090	89	0.0120	0.0120
30	0.0030	0.0030	60	0.0070	0.0100	90	0.0110	0.0110
31	0.0030	0.0030	61	0.0080	0.0110	91	0.0100	0.0100
32	0.0030	0.0030	62	0.0090	0.0120	92	0.0090	0.0090
33	0.0030	0.0030	63	0.0100	0.0120	93	0.0080	0.0080
34	0.0030	0.0030	64	0.0110	0.0120	94	0.0070	0.0070
35	0.0030	0.0030	65	0.0120	0.0120	95	0.0060	0.0060
36	0.0030	0.0030	66	0.0130	0.0120	96	0.0050	0.0050
37	0.0030	0.0030	67	0.0140	0.0120	97	0.0040	0.0040
38	0.0030	0.0030	68	0.0150	0.0120	98	0.0040	0.0040
39	0.0030	0.0030	69	0.0150	0.0120	99	0.0030	0.0030
40	0.0030	0.0030	70	0.0150	0.0120	100	0.0030	0.0030
41	0.0030	0.0030	71	0.0150	0.0120	101	0.0020	0.0020
42	0.0030	0.0030	72	0.0150	0.0120	102	0.0020	0.0020
43	0.0030	0.0030	73	0.0150	0.0120	103	0.0010	0.0010
44	0.0030	0.0030	74	0.0150	0.0120	104	0.0010	0.0010
45	0.0030	0.0030	75	0.0150	0.0120	105	0.0000	0.0000
46	0.0030	0.0030	76	0.0150	0.0120	106	0.0000	0.0000
47	0.0030	0.0030	77	0.0150	0.0120	107	0.0000	0.0000
48	0.0030	0.0030	78	0.0150	0.0120	108	0.0000	0.0000
49	0.0030	0.0030	79	0.0150	0.0120	109	0.0000	0.0000
						110	0.0000	0.0000

Service Retirement				Disablement*		Ratio of Survivors Selecting Annuities**		
LEOFF 1		LEOFF 2		LEOFF 1	LEOFF 2	LEOFF 1	LEOFF 2	
Service Service less than 30 years greater than or equal to 30 years								
Age	Male & Female			Male & Female		Male & Female		Age
20	0.00	0.00	0.00	0.0010	0.0001	0.00	0.00	20
21	0.00	0.00	0.00	0.0010	0.0001	0.00	0.00	21
22	0.00	0.00	0.00	0.0010	0.0001	0.00	0.00	22
23	0.00	0.00	0.00	0.0010	0.0001	0.00	0.00	23
24	0.00	0.00	0.00	0.0010	0.0002	0.00	0.00	24
25	0.00	0.00	0.00	0.0010	0.0002	0.00	0.00	25
26	0.00	0.00	0.00	0.0024	0.0002	0.00	0.00	26
27	0.00	0.00	0.00	0.0038	0.0003	0.00	0.00	27
28	0.00	0.00	0.00	0.0052	0.0003	0.00	0.00	28
29	0.00	0.00	0.00	0.0066	0.0004	0.00	0.00	29
30	0.00	0.00	0.00	0.0080	0.0005	0.00	0.00	30
31	0.00	0.00	0.00	0.0094	0.0005	0.00	0.02	31
32	0.00	0.00	0.00	0.0107	0.0006	0.00	0.12	32
33	0.00	0.00	0.00	0.0121	0.0006	0.00	0.19	33
34	0.00	0.00	0.00	0.0135	0.0007	0.00	0.24	34
35	0.00	0.00	0.00	0.0149	0.0008	0.00	0.28	35
36	0.00	0.00	0.00	0.0163	0.0009	0.00	0.32	36
37	0.00	0.00	0.00	0.0190	0.0011	0.00	0.35	37
38	0.00	0.00	0.00	0.0205	0.0012	0.00	0.38	38
39	0.00	0.00	0.00	0.0220	0.0013	0.00	0.41	39
40	0.00	0.00	0.00	0.0235	0.0014	0.64	0.43	40
41	0.00	0.00	0.00	0.0249	0.0014	0.64	0.45	41
42	0.00	0.00	0.00	0.0264	0.0015	0.64	0.47	42
43	0.00	0.00	0.00	0.0279	0.0016	0.64	0.49	43
44	0.00	0.00	0.00	0.0360	0.0017	0.64	0.51	44
45	0.00	0.00	0.00	0.0400	0.0018	0.64	0.52	45
46	0.00	0.00	0.00	0.0468	0.0020	0.64	0.54	46
47	0.00	0.00	0.00	0.0532	0.0023	0.64	0.55	47
48	0.00	0.00	0.00	0.0592	0.0026	0.64	0.56	48
49	0.00	0.00	0.00	0.0648	0.0029	0.64	0.58	49

Disability and Ratio of Survivors Selecting Annuities rates have been rounded for display purposes.

*LEOFF disability retirements are assumed to continue after service retirement eligibility, except for LEOFF 1 members with more than 30 years of service.

Please see the 2013 AVR for full LEOFF 1 assumptions.

**Refers to survivor who selects annuity payments (rather than a lump sum payment) upon active or terminated vested member's death. The LEOFF 2 ratio is 0.642 for duty-related deaths.

Service Retirement (Continued)				Disablement*		Ratio of Survivors Selecting Annuities** (Continued)		
LEOFF 1		LEOFF 2		LEOFF 1	LEOFF 2	LEOFF 1	LEOFF 2	
	Service Service less greater than than 30 or equal to years 30 years							
Age	Male & Female			Male & Female		Male & Female		Age
50	0.07	0.12	0.03	0.0700	0.0032	0.64	0.59	50
51	0.07	0.12	0.04	0.0748	0.0036	0.64	0.60	51
52	0.07	0.12	0.05	0.0792	0.0040	0.64	0.61	52
53	0.07	0.12	0.10	0.0832	0.0045	0.64	0.62	53
54	0.10	0.16	0.10	0.0868	0.0050	0.64	0.63	54
55	0.10	0.20	0.10	0.0900	0.0055	0.64	0.64	55
56	0.10	0.20	0.10	0.0928	0.0062	0.64	0.65	56
57	0.13	0.20	0.10	0.0952	0.0069	0.64	0.66	57
58	0.13	0.20	0.15	0.0972	0.0076	0.64	0.67	58
59	0.13	0.20	0.15	0.0988	0.0085	0.64	0.67	59
60	0.23	0.25	0.15	0.1000	0.0095	0.64	0.68	60
61	0.23	0.25	0.19	0.1008	0.0105	0.64	0.69	61
62	0.23	0.25	0.23	0.1012	0.0117	0.67	0.73	62
63	0.23	0.25	0.20	0.1012	0.0131	0.67	0.74	63
64	0.23	0.25	0.20	0.1008	0.0145	0.67	0.75	64
65	0.23	0.25	0.25	0.1000	0.0162	0.67	0.75	65
66	0.23	0.25	0.25	0.0756	0.0026	0.67	0.75	66
67	0.23	0.25	0.25	0.0544	0.0004	0.67	0.75	67
68	0.23	0.25	0.25	0.0364	0.0001	0.67	0.75	68
69	0.23	0.25	0.25	0.0216	0.0000	0.67	0.75	69
70	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	70
71	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	71
72	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	72
73	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	73
74	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	74
75	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	75
76	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	76
77	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	77
78	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	78
79	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	79
80+	1.00	1.00	1.00	0.0000	0.0000	0.67	0.75	80+

Disability and Ratio of Survivors Selecting Annuities rates have been rounded for display purposes.

*LEOFF disability retirements are assumed to continue after service retirement eligibility, except for LEOFF 1 members with more than 30 years of service.

Please see the 2013 AVR for full LEOFF 1 assumptions.

**Refers to survivor who selects annuity payments (rather than a lump sum payment) upon active or terminated vested member's death. The LEOFF 2 ratio is 0.642 for duty-related deaths.

		Probability of Vesting upon Termination*				
Termination		(for those not eligible to retire early)		Step Salary Increases		
LEOFF		LEOFF 1	LEOFF 2	LEOFF		
Service Years	Male & Female	Male & Female		% Increase	Salary Ratio	Service Years
0	0.1070	0.000	0.000	10.70%	1.827	0
1	0.0481	0.000	0.000	10.70%	1.650	1
2	0.0245	0.000	0.000	7.50%	1.491	2
3	0.0194	0.000	0.000	5.90%	1.387	3
4	0.0187	0.000	0.000	3.70%	1.310	4
5	0.0181	1.000	0.325	2.60%	1.263	5
6	0.0174	1.000	0.350	1.80%	1.231	6
7	0.0168	1.000	0.350	1.40%	1.209	7
8	0.0161	1.000	0.350	1.30%	1.192	8
9	0.0155	1.000	0.375	1.20%	1.177	9
10	0.0148	1.000	0.375	1.70%	1.163	10
11	0.0142	1.000	0.400	1.20%	1.144	11
12	0.0135	1.000	0.400	1.20%	1.130	12
13	0.0129	1.000	0.400	1.20%	1.117	13
14	0.0122	1.000	0.400	1.20%	1.104	14
15	0.0116	1.000	0.400	1.20%	1.090	15
16	0.0109	1.000	0.450	1.00%	1.078	16
17	0.0103	1.000	0.450	1.00%	1.067	17
18	0.0096	1.000	0.500	1.00%	1.056	18
19	0.0090	1.000	0.550	1.00%	1.046	19
20	0.0083	1.000	0.600	1.00%	1.036	20
21	0.0077	1.000	0.600	0.50%	1.025	21
22	0.0070	1.000	0.650	0.50%	1.020	22
23	0.0064	1.000	0.800	0.50%	1.015	23
24	0.0057	1.000	0.850	0.50%	1.010	24
25	0.0051	1.000	0.900	0.50%	1.005	25
26	0.0044	1.000	0.900	0.00%	1.000	26
27	0.0038	1.000	0.900	0.00%	1.000	27
28	0.0031	1.000	0.950	0.00%	1.000	28
29	0.0025	1.000	0.950	0.00%	1.000	29
30+	0.0018	1.000	0.950	0.00%	1.000	30+

Termination rates have been rounded for display purposes.

**Denotes ratio of members who do not withdraw their savings when they leave employment.*

Early Retirement Factors		
Years Early	LEOFF 2*	Subsidized 3%**
0	1.000	1.00
1	0.914	0.97
2	0.836	0.94
3	0.765	0.91
4	0.701	N/A
5	0.642	N/A
6	0.589	N/A
7	0.541	N/A
8	0.497	N/A
9	0.456	N/A
10	0.420	N/A
11	0.386	N/A
12	0.355	N/A
13	0.327	N/A
14	0.301	N/A
15	0.278	N/A
16	0.256	N/A
17	0.236	N/A
18	0.218	N/A
19	0.201	N/A
20	0.186	N/A
21	0.171	N/A
22	0.158	N/A
23	0.146	N/A
24	0.135	N/A
25	0.125	N/A
26	0.116	N/A
27	0.107	N/A
28	0.100	N/A
29	0.100	N/A
30+	0.100	N/A

From Normal Retirement Age.

**Only applies to non-duty disabilities and deaths.*

***LEOFF 2 members must be at least age 50 with 20 or more years of service to qualify.*

Section 4: Appendices

Average Final Compensation Load	
System/Plan	Load
LEOFF 1	4.50%

Reflects allowances for cashouts of annual and sick leave for calculation of Average Final Compensation.

Member/Beneficiary Age Difference (In Years)		
	Male Member	Female Member
LEOFF	3	(1)

Age difference is Member age minus Beneficiary age.

Duty-Related Death Assumption	
	Duty Death Rate*
LEOFF 1	0.0350%
LEOFF 2	0.0350%

*The duty death rate is a constant probability, regardless of age.

The nonduty death rate is obtained by subtracting duty death rate from mortality rate for any given age.

Additional Duty-Related Assumptions for LEOFF 2	
Percent of disabilities assumed to be catastrophic	12%
Percent of deaths assumed to be caused by occupational diseases for fire fighters	
Age	Rate
20-49	14.74%
50-69	27.39%
Percent of Final Average Salary paid for catastrophic disability benefits (including offset adjustments).	44%

Joint and 100 Percent Survivor Option Factors*		
	Male Members	Female Members
LEOFF 2	0.859	0.881

*Applied to on-going survivor benefits in the event of a non-duty, pre-retirement death. Based on our member/beneficiary age difference assumptions and the option factors in WAC 415-02-380. Reductions apply to non-duty death benefits only.

Certain and Life Annuities: Years Certain	
LEOFF 1	3
LEOFF 2	5

Assumed Retirement Age from Inactive Status	
LEOFF 2	53 (50 if service >= 20 years)

LEOFF 2 Duty-Related Disability Assumption	
Age	Duty Disability Rate*
20	97.25%
25	95.86%
30	94.50%
35	93.11%
40	91.75%
45	89.00%
50	86.25%
55+	83.50%

*Probability of disability being duty-related; geometrically interpolated between given values. Applies to LEOFF 2 only. Table represents a summary of rates.

Average Ratio of Survivors of Inactive Deaths Selecting Annuities*	
LEOFF 2	56%

*Refers to survivor who selects annuity payments (rather than a lump sum payment) if a currently terminated vested member dies before retirement age.

Employee Contribution Rates for Savings Fund Accrual	
LEOFF 2	8.41%

This assumption helps us estimate the value of accumulated employee contributions with interest if a member elects a refund of contributions instead of a deferred retirement allowance upon termination.

*No LEOFF 1 rates are required as long as the plan remains fully funded.

Medical Premium Reimbursement

Medical Premium Reimbursement

RCW 41.26.510(5) states that qualified survivors and children of line-of-duty deaths (Survivors) in LEOFF 2 shall have medical premiums reimbursed from the retirement fund. The law also provides that all survivors will be covered by the Public Employees Benefits Board (PEBB).

RCW 41.26.470(10) states that LEOFF 2 members with total disabilities (Disabilities) and qualified family members shall have medical premiums reimbursed from the retirement fund.

The costs for these benefits are included in the results presented in this report. However, the benefits are funded through irrevocable trust funds, known as 401(h) accounts, from contribution rates selected by the Department of Retirement Systems (DRS) and the LEOFF 2 Board. These contribution rates are “carved out” of the total adopted contribution rates. DRS and the LEOFF 2 Board will periodically review the funding requirements for these benefits and adjust the 401(h) contribution rates as necessary.

The information below represents methods and assumptions tied directly to the medical premium reimbursement benefits. Please see the [2013 Other Post-Employment Benefits Actuarial Valuation Report](#) (OPEB Report) for the assumptions referenced below.

Medical Inflation

- ◆ **Current and Future Survivors, and Future Disabilities:** Uniform Medical Plan Medicare and Pre-Medicare assumptions (OPEB report).
- ◆ **Current Disabilities:** 5 percent per year.

Percent Married

- ◆ **Future Disabilities:** 85 percent.
- ◆ **Current Disabilities:** 100 percent.

Percent With Children

- ◆ **Disabilities and Survivors:** 100 percent, one child each.

Premium Percentages

When the data for members currently qualifying for total disability benefits does not provide information about how many family members are covered, we use the assumptions in the table at the right to split the total premium into each family member’s share.

Premium Percentages (Current Disabilities)	
Family Member	Percent of Total Premium
Primary	34%
Spouse	49%
Child	17%
All	100%

Assumed Coverage Type, Future Disabilities

- ◆ Fifty percent covered by policies provided under the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA).
- ◆ Fifty percent covered by employer-provided policies.

Assumed Timing/Length of Coverage

Assumed Timing/Length of Coverage			
Coverage Type	Beneficiary Type	Start of Coverage	End of Coverage
COBRA			
	Future Disabilities	Upon Benefit Commencement	2.5 Years after Commencement*
	Current Disabilities	Upon Benefit Commencement	29 Months after Commencement
Employer/PEBB			
	Survivors and Spouses of Disabilities	Upon Benefit Commencement	Age 65**
	Disabilities	Upon Benefit Commencement	29 Months after Commencement
	Child	Upon Benefit Commencement	10 Years after Commencement**
Medicare			
	Future Disabilities	2.5 Years after Commencement*	Paid for Life
	Current Disabilities	29 Months after Commencement	Paid for Life
	Survivors and Spouses of Disabilities	Age 65**	Paid for Life**
State-Provided Medicare Subsidy***			
	Current and Future Disabilities	29 Months After Commencement	Paid for Life

*Because of a limitation in the model, we assume 2 years for 50% of members, and 3 years for 50% of members, depending on member's age at benefit commencement.

**Benefits paid to spouses and child(ren) of Disabilities for the life of the member.

***Whether member is covered by COBRA or other means, we assume the member is also covered under the state's explicit Medicare subsidy.

Assumed Premiums

Disabilities (Used for Future Disabilities and Current Disabilities Who Have Missing Values)			
Coverage Type	Family Member	Category	Annual Premium
COBRA			
	Member	Pre-Medicare	\$10,376.62
	Spouse	Pre-Medicare	5,807.57
	Child	Pre-Medicare	\$3,058.40
Employer			
	Member	Pre-Medicare	\$12,895.81
		Medicare	7,854.30
	Spouse	Pre-Medicare	11,457.78
		Medicare	7,392.38
	Child	Pre-Medicare	\$3,962.35
Total Disabilities			
State-Provided Medicare Subsidy			
	Age	Annual Subsidy	
	Less than 25	\$6,472.80	
	25-27	4,084.80	
	28 and Above	\$1,156.80	
Future Survivors (Covered under PEBB Options)			
Family Member	Category	Annual Premium Medical	Dental
Survivor			
	Pre-Medicare	\$6,549.96	\$556.08
	Medicare	\$2,630.88	\$556.08
Child			
	Pre-Medicare	\$4,856.88	\$556.08

Miscellaneous Assumptions/Methods

We include the following miscellaneous assumptions and methods in this valuation:

- ◆ Minimum and maximum allowable ages are set in the data as follows.

	Non-Annuitants	Annuitants
Minimum Age	16	20
Maximum Age	80	110

- ◆ Default entry salaries, usually increased for past service, are assigned for active members with less than two months' service during the valuation year.
- ◆ Historical salaries for vested terminated members are not provided in the valuation data. Beginning with the 2008 valuation year, we first look to see if we kept a historical salary for such a member in the prior year's data. If so, we copy the salary to the current year's data. If a member was active in the prior year and terminated in the current year, we copy the prior year's salary to the current year's salary and keep it as historical.
- ◆ Additionally, in 2009 we searched our data for actual salaries up to ten years prior for terminated vested members who did not already have historical salaries listed. To estimate salaries for the remaining terminated vested

members, we use the following procedure: First, a salary appropriate for LEOFF 2 and the member's total past service is assigned. These salaries are determined as of a given base year. Second, the salary is divided by the general salary increase assumption for each year the member has been inactive as measured from the base year.

- ◆ DRS reports salaries earned during the year prior to the valuation date. However, the salaries used in the first year of the valuation process have received an additional merit salary increase. In other words, the valuation software projects salaries to the coming year, beginning the day after the valuation date.
- ◆ LEOFF 2 uses a midyear decrement timing assumption.
- ◆ Members who receive a disability benefit are not assumed to return to active duty in the future.
- ◆ Termination rates are discontinued after members are eligible to retire.

Summary of Plan Provisions

The table to the right presents a high-level summary of the plan provisions and is not meant to contain an exhaustive list. For complete details of plan provisions, please refer to the statute shown in the table or contact the plan administrator, the Department of Retirement Systems. In the unlikely event that information contained in this table conflicts with state law, the law takes precedence.

Summary of Plan Provisions	
Effective Date of Plan	10/1/77
Date Closed to New Entrants	Open
Statutory Reference	Chapter 41.26 RCW
Normal Retirement Eligibility (age/service)	53/5
Accrued Benefit Formula	2% x YOS x AFC; 0.25% per month pre-retirement COLA with 20 years of service
Computation of FAS/AFC	Average compensation earnable for the highest 60 consecutive months
Credited Service	Monthly, based on hours worked each month
Vesting	5 years
Vested Benefits Upon Termination	Refund of employee contributions (x 150% if 10 YOS) plus interest, or deferred retirement allowance
Early Retirement Eligibility (age/service)	50/20
Early Retirement Reduction Factors	3% ERF with 20 YOS
Disability Retirement Benefit	Non-duty: accrued benefit, actuarially reduced; Duty, occupational: accrued benefit without actuarial reduction, minimum 10% of AFC; Duty, total: 70% of AFC with offsets for Social Security and L&I benefits, not to exceed 100% of AFC.
COLA	Lesser of CPI* or 3%
Minimum Benefit per Month per YOS	n/a
Changes in Plan Provisions Since Last Valuation	Annuity Purchase (C 91 L 14); Definition of Firefighter (C 145 L 14)
Material Benefits not Included in this Valuation	We are not currently valuing portability with Seattle, Tacoma, & Spokane

*CPI: Urban Wage Earners & Clerical Workers, Seattle-Tacoma-Bremerton, WA - All Items.

Age/Service Distribution

Age and Service Distribution of Active Law Enforcement Officers (Number of Actives and Average Annual Salary)																
LEOFF Plan 2																
Attained Age	Attained Years of Service															
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total		
Under 25	25	20	7	0	0	0	0	0	0	0	0	0	0	52		
	\$54,455	\$58,993	\$79,863	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$59,621		
25-29	82	82	53	43	61	198	0	0	0	0	0	0	0	519		
	\$57,855	\$60,910	\$66,635	\$72,571	\$78,977	\$83,268	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72,631		
30-34	40	57	48	73	77	707	89	0	0	0	0	0	0	1,091		
	\$57,595	\$64,958	\$70,367	\$78,792	\$80,393	\$86,694	\$86,995	\$0	\$0	\$0	\$0	\$0	\$0	\$82,825		
35-39	25	39	32	34	43	530	537	121	0	0	0	0	0	1,361		
	\$57,554	\$65,380	\$72,674	\$79,028	\$82,412	\$86,048	\$91,745	\$96,251	\$0	\$0	\$0	\$0	\$0	\$87,483		
40-44	23	23	21	20	28	363	579	674	127	0	0	0	0	1,858		
	\$57,507	\$63,847	\$77,162	\$72,068	\$82,099	\$83,547	\$90,665	\$95,883	\$105,782	\$0	\$0	\$0	\$0	\$90,976		
45-49	3	10	8	11	7	153	271	501	620	129	0	0	0	1,713		
	\$72,096	\$60,014	\$77,919	\$82,520	\$73,134	\$84,378	\$92,392	\$98,112	\$102,546	\$107,201	\$0	\$0	\$0	\$97,705		
50-54	1	5	2	6	5	61	123	199	397	409	81	1	0	1,290		
	* \$70,847	\$66,748	\$66,748	\$82,112	\$95,635	\$79,085	\$91,232	\$94,504	\$102,196	\$110,032	\$112,354	*	\$0	\$101,685		
55-59	4	0	5	5	1	28	38	84	134	192	218	26	0	735		
	\$68,858	\$0	\$77,944	\$121,683	*	\$83,484	\$83,741	\$92,065	\$98,747	\$106,422	\$115,393	\$116,968	\$0	\$104,151		
60-64	0	1	1	2	0	12	14	34	36	63	90	21	0	274		
	\$0	*	*	\$74,439	\$0	\$84,359	\$94,766	\$86,439	\$95,420	\$98,510	\$109,201	\$106,827	\$0	\$99,723		
65-69	0	1	0	0	0	3	4	3	5	12	9	1	0	38		
	\$0	*	\$0	\$0	\$0	\$69,316	\$80,458	\$74,196	\$68,637	\$97,354	\$100,336	*	\$0	\$88,380		
70 & Over	0	0	0	0	0	0	1	0	0	0	1	0	0	2		
	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	*	\$0	\$0	\$117,743		
Total	203	238	177	194	222	2,055	1,656	1,616	1,319	805	399	49	0	8,933		
	\$57,764	\$63,002	\$71,630	\$78,136	\$81,092	\$85,161	\$91,010	\$95,994	\$102,043	\$107,627	\$113,047	\$112,710	\$0	\$92,384		

Average: Age 43.4 Number of Participants: Vested 7,692 Males 8,085 Early Retirement Eligible: 560
Service 14.4 Not Vested 1,241 Females 848 Normal Retirement Eligible: 1,470

*Annual Salary omitted for privacy reasons.
Numbers of participants eligible for early and normal retirement are estimates only.

Age and Service Distribution of Active Fire Fighters (Number of Actives and Average Annual Salary) (Continued)														
LEOFF Plan 2														
Attained Age	Attained Years of Service													
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 25	21	18	6	2	1	0	0	0	0	0	0	0	0	48
	\$57,006	\$60,915	\$63,868	\$77,285	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$59,779
25-29	26	67	70	45	69	173	0	0	0	0	0	0	0	450
	\$60,589	\$62,324	\$71,166	\$73,586	\$80,170	\$86,686	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,828
30-34	36	57	57	47	69	543	126	0	0	0	0	0	0	935
	\$58,464	\$62,967	\$70,791	\$78,546	\$82,532	\$90,222	\$95,797	\$0	\$0	\$0	\$0	\$0	\$0	\$85,750
35-39	16	18	29	35	54	404	506	116	0	0	0	0	0	1,178
	\$58,046	\$59,660	\$72,205	\$78,174	\$82,303	\$90,328	\$97,614	\$102,840	\$0	\$0	\$0	\$0	\$0	\$92,607
40-44	8	9	16	12	28	254	522	536	152	1	0	0	0	1,538
	\$56,270	\$61,552	\$71,402	\$81,522	\$81,199	\$90,471	\$98,623	\$104,876	\$108,290	*	\$0	\$0	\$0	\$99,238
45-49	2	5	11	6	14	113	243	380	478	123	0	0	0	1,375
	\$54,002	\$59,306	\$71,874	\$77,208	\$82,978	\$91,247	\$96,538	\$106,251	\$110,269	\$119,233	\$0	\$0	\$0	\$104,974
50-54	3	5	3	5	1	34	116	198	387	346	141	3	0	1,242
	\$110,536	\$75,344	\$95,594	\$106,877	*	\$85,169	\$94,529	\$102,091	\$110,815	\$115,963	\$123,928	\$129,684	\$0	\$109,982
55-59	0	5	3	1	4	13	42	82	177	185	221	18	0	751
	\$0	\$91,783	\$136,552	*	\$120,940	\$101,365	\$96,480	\$101,136	\$106,709	\$116,076	\$124,188	\$130,313	\$0	\$113,503
60-64	1	1	1	1	1	9	21	22	38	36	76	7	0	214
	*	*	*	*	*	\$83,108	\$108,736	\$94,894	\$109,230	\$113,364	\$119,526	\$110,949	\$0	\$109,910
65-69	0	0	0	0	0	0	3	1	6	3	7	2	0	22
	\$0	\$0	\$0	\$0	\$0	\$0	\$104,784	*	\$105,688	\$117,922	\$108,243	\$105,864	\$0	\$109,958
70 & Over	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	*
Total	113	185	196	154	241	1,543	1,579	1,335	1,238	694	446	30	0	7,754
	\$59,736	\$63,084	\$72,325	\$77,896	\$82,357	\$89,910	\$97,542	\$104,315	\$109,634	\$116,416	\$123,046	\$124,102	\$0	\$99,506

Average:	Age	43.6	Number of Participants:	Vested	6,697	Males	7,299	Early Retirement Eligible:	556
	Service	14.9		Not Vested	1,057	Females	455	Normal Retirement Eligible:	1,406

*Annual Salary omitted for privacy reasons.
Numbers of participants eligible for early and normal retirement are estimates only.

Age/Years Retired Distribution

Age and Years Retired Distribution of Service Retired Law Enforcement Officers (Number of Service Retired Members and Average Monthly Benefit)																
Attained Age	LEOFF Plan 2															
	Attained Years Retired															
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total		
Under 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50-54	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	31	55	12	9	6	0	0	0	0	0	0	0	0	113	0	113
55-59	\$3,330	\$2,883	\$3,435	\$3,038	\$3,636	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,117	\$0	\$3,117
	43	68	96	95	66	149	0	0	0	0	0	0	0	517	0	517
60-64	\$4,576	\$4,301	\$3,846	\$3,679	\$2,957	\$2,960	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,567	\$0	\$3,567
	32	44	49	47	25	257	40	0	0	0	0	0	0	494	0	494
65-69	\$4,188	\$3,808	\$3,609	\$3,644	\$3,613	\$2,756	\$1,770	\$0	\$0	\$0	\$0	\$0	\$0	\$3,075	\$0	\$3,075
	10	9	28	15	14	80	76	1	0	0	0	0	0	233	0	233
70-74	\$4,055	\$3,612	\$2,590	\$3,478	\$2,894	\$2,702	\$1,638	*	\$0	\$0	\$0	\$0	\$0	\$2,492	\$0	\$2,492
	3	2	2	3	3	24	32	12	0	0	0	0	0	81	0	81
75-79	\$3,040	\$2,690	\$1,990	\$3,826	\$1,460	\$2,414	\$1,513	\$1,034	\$0	\$0	\$0	\$0	\$0	\$1,890	\$0	\$1,890
	0	0	0	0	0	5	7	5	3	0	0	0	0	20	0	20
80-84	\$0	\$0	\$0	\$0	\$0	\$2,098	\$1,642	\$1,070	\$615	\$0	\$0	\$0	\$0	\$1,459	\$0	\$1,459
	0	0	0	0	0	0	1	4	1	0	0	0	0	6	0	6
85-89	\$0	\$0	\$0	\$0	\$0	\$0	*	\$1,539	*	\$0	\$0	\$0	\$0	\$1,219	\$0	\$1,219
	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
90-94	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	*	\$0	*
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95 & Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	119	178	187	169	114	515	156	22	4	1	0	0	0	1,465	0	1,465
	\$4,064	\$3,688	\$3,550	\$3,620	\$3,089	\$2,784	\$1,636	\$1,161	\$725	*	\$0	\$0	\$0	\$3,062	\$0	\$3,062

Average: Age 61.1
Years Retired 5.0

Males 1,340
Females 125

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of Service Retired Fire Fighters (Number of Service Retired Members and Average Monthly Benefit)														
(Continued)														
LEOFF Plan 2														
Attained Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
50-54	19	20	4	2	1	0	0	0	0	0	0	0	0	46
	\$4,490	\$4,195	\$3,994	\$3,316	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,228
55-59	46	70	63	41	41	47	0	0	0	0	0	0	0	308
	\$4,896	\$4,895	\$4,642	\$3,881	\$3,479	\$2,999	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,231
60-64	38	38	46	38	19	126	12	0	0	0	0	0	0	317
	\$4,612	\$4,502	\$4,713	\$4,238	\$3,339	\$3,110	\$2,389	\$0	\$0	\$0	\$0	\$0	\$0	\$3,811
65-69	5	13	10	8	8	44	33	0	0	0	0	0	0	121
	\$3,464	\$3,497	\$4,225	\$3,771	\$3,988	\$2,995	\$2,505	\$0	\$0	\$0	\$0	\$0	\$0	\$3,153
70-74	0	1	3	5	1	18	13	3	0	0	0	0	0	44
	\$0	*	\$2,855	\$2,041	*	\$2,358	\$1,897	\$1,227	\$0	\$0	\$0	\$0	\$0	\$2,051
75-79	0	0	0	0	0	2	8	7	6	0	0	0	0	23
	\$0	\$0	\$0	\$0	\$0	\$2,535	\$1,825	\$1,336	\$930	\$0	\$0	\$0	\$0	\$1,504
80-84	0	0	0	0	0	0	2	1	2	1	0	0	0	6
	\$0	\$0	\$0	\$0	\$0	\$0	\$1,652	*	\$652	*	\$0	\$0	\$0	\$1,402
85-89	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	*
90-94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
95 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	108	142	126	94	70	237	68	11	9	1	0	0	0	866
	\$4,658	\$4,532	\$4,571	\$3,906	\$3,441	\$3,005	\$2,263	\$1,454	\$796	*	\$0	\$0	\$0	\$3,719

Average: Age 61.4
 Years Retired 4.4
*Monthly benefit omitted for privacy reasons.

Males 824
Females 42

Age and Years Retired Distribution of All Law Enforcement Officers With Disabilities (Number of All Members With Disabilities and Average Monthly Benefit)															
LEOFF Plan 2															
Attained Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total	
Under 50	4	10	3	4	3	11	3	0	0	0	0	0	0	38	
	\$1,938	\$1,842	\$1,327	\$2,153	\$1,358	\$1,334	\$583	\$0	\$0	\$0	\$0	\$0	\$0	\$1,560	
50-54	1	3	1	5	1	7	4	0	0	0	0	0	0	22	
	*	\$2,704	*	\$2,891	*	\$1,712	\$902	\$0	\$0	\$0	\$0	\$0	\$0	\$2,283	
55-59	2	4	1	2	4	23	6	1	0	0	0	0	0	43	
	\$3,875	\$4,601	*	\$3,585	\$2,648	\$3,078	\$863	*	\$0	\$0	\$0	\$0	\$0	\$2,891	
60-64	0	2	4	4	2	25	5	0	1	0	0	0	0	43	
	\$0	\$4,380	\$2,094	\$3,063	\$4,426	\$2,594	\$1,893	\$0	*	\$0	\$0	\$0	\$0	\$2,621	
65-69	0	1	0	0	2	10	9	0	0	0	0	0	0	22	
	\$0	*	\$0	\$0	\$2,567	\$2,825	\$1,558	\$0	\$0	\$0	\$0	\$0	\$0	\$2,359	
70-74	0	0	0	0	0	2	1	1	0	0	0	0	0	4	
	\$0	\$0	\$0	\$0	\$0	\$630	*	*	\$0	\$0	\$0	\$0	\$0	\$737	
75-79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
80-84	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	*	
85-89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
90-94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
95 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total	\$2,492	\$2,910	\$2,479	\$2,833	\$2,639	\$2,459	\$1,257	\$1,058	1	0	1	0	0	173	
									*	\$0	*	\$0	\$0	\$2,321	

Average:

Age 56.6
Years Retired 6.2Males 141
Females 32

**Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of All Fire Fighters With Disabilities (Number of All Members With Disabilities and Average Monthly Benefit)														
(Continued)														
LEOFF Plan 2														
Attained Age	Attained Years Retired													
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 50	0	0	0	1	0	4	2	0	0	0	0	0	0	7
	\$0	\$0	\$0	*	\$0	\$786	\$1,104	\$0	\$0	\$0	\$0	\$0	\$0	\$1,017
50-54	2	2	1	3	0	5	3	0	0	0	0	0	0	16
	\$4,075	\$5,308	*	\$1,257	\$0	\$1,829	\$889	\$0	\$0	\$0	\$0	\$0	\$0	\$2,391
55-59	2	7	3	7	5	11	3	0	0	0	0	0	0	38
	\$3,817	\$3,839	\$4,947	\$3,733	\$3,423	\$3,173	\$2,186	\$0	\$0	\$0	\$0	\$0	\$0	\$3,528
60-64	2	4	6	1	3	16	3	0	0	0	0	0	0	35
	\$3,194	\$4,766	\$4,861	*	\$3,316	\$3,265	\$2,918	\$0	\$0	\$0	\$0	\$0	\$0	\$3,684
65-69	0	0	0	2	1	5	5	0	0	0	0	0	0	13
	\$0	\$0	\$0	\$3,207	*	\$2,288	\$2,191	\$0	\$0	\$0	\$0	\$0	\$0	\$2,495
70-74	0	0	0	0	0	1	1	2	0	0	0	0	0	4
	\$0	\$0	\$0	\$0	\$0	*	*	\$680	\$0	\$0	\$0	\$0	\$0	\$1,133
75-79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
80-84	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
85-89	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
90-94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
95 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	6	13	10	14	9	42	17	2	0	0	0	0	0	113
	\$3,696	\$4,350	\$4,791	\$2,963	\$3,409	\$2,673	\$1,937	\$680	\$0	\$0	\$0	\$0	\$0	\$3,056

Average:

Age58.9

Years Retired5.6

*Monthly benefit omitted for privacy reasons.

Males101

Females12

Age and Years Retired Distribution of Survivors of Law Enforcement Officers (Number of Survivors and Average Monthly Benefit)																
LEOFF Plan 2																
Attained Age	Attained Years Retired															
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total		
Under 50	0	1	3	15	5	5	1	0	0	0	0	0	0	30		
	\$0	*	\$1,023	\$777	\$1,528	\$1,790	*	\$0	\$0	\$0	\$0	\$0	\$0	\$1,149		
50-54	1	1	4	6	1	6	2	0	0	0	0	0	0	21		
	*	*	\$3,958	\$1,243	*	\$1,994	\$1,291	\$0	\$0	\$0	\$0	\$0	\$0	\$2,105		
55-59	1	1	0	9	5	11	4	0	0	0	0	0	0	31		
	*	*	\$0	\$437	\$1,916	\$2,059	\$1,183	\$0	\$0	\$0	\$0	\$0	\$0	\$1,502		
60-64	0	1	0	2	0	4	2	0	0	0	0	0	0	9		
	\$0	*	\$0	\$2,043	\$0	\$2,484	\$1,458	\$0	\$0	\$0	\$0	\$0	\$0	\$2,367		
65-69	0	0	0	2	2	3	3	0	0	0	0	0	0	10		
	\$0	\$0	\$0	\$1,846	\$1,166	\$3,225	\$863	\$0	\$0	\$0	\$0	\$0	\$0	\$1,829		
70-74	0	0	0	0	0	2	2	2	0	0	0	0	0	6		
	\$0	\$0	\$0	\$0	\$0	\$2,111	\$1,069	\$1,135	\$0	\$0	\$0	\$0	\$0	\$1,438		
75-79	0	0	0	1	0	0	1	0	1	0	0	0	0	3		
	\$0	\$0	\$0	*	\$0	\$0	*	\$0	*	\$0	\$0	\$0	\$0	\$800		
80-84	0	0	0	0	0	0	1	0	0	0	0	0	0	1		
	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	*		
85-89	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
90-94	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
95 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Total	\$3,303	2	\$2,370	\$2,700	\$2,700	\$2,174	\$1,312	\$1,135	*	1	0	0	0	111		

Average:

Age 54.4
Years Retired 5.8

Males 2
Females 109

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of Survivors of Fire Fighters (Number of Survivors and Average Monthly Benefit)														
(Continued)														
LEOFF Plan 2														
Attained Age	Attained Years Retired													
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 50	0	1	4	3	1	3	0	0	0	0	0	0	0	12
	\$0	*	\$1,809	\$743	*	\$1,870	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,599
50-54	1	0	1	1	1	4	0	0	0	0	0	0	0	8
	*	\$0	*	*	*	\$4,530	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,914
55-59	0	1	0	4	1	5	0	0	0	0	0	0	0	11
	\$0	*	\$0	\$2,837	*	\$2,008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,460
60-64	1	0	0	2	3	4	3	1	0	0	0	0	0	14
	*	\$0	\$0	\$2,435	\$2,586	\$2,478	\$2,452	*	\$0	\$0	\$0	\$0	\$0	\$2,565
65-69	0	0	1	0	1	2	0	1	0	0	0	0	0	5
	\$0	\$0	*	\$0	*	\$3,191	\$0	*	\$0	\$0	\$0	\$0	\$0	\$3,461
70-74	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
75-79	0	0	0	0	0	0	0	2	0	0	0	0	0	2
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$809	\$0	\$0	\$0	\$0	\$0	\$809
80-84	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	*
85-89	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	*
90-94	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
95 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	2	2	6	10	7	18	3	5	1	0	0	0	0	54
	\$3,110	\$2,780	\$2,477	\$2,588	\$2,832	\$2,781	\$2,452	\$668	*	\$0	\$0	\$0	\$0	\$2,491

Average: Age 56.1

Years Retired 6.5

*Monthly benefit omitted for privacy reasons.

Males 1

Females 53

Historical Data

Historical Data											
(Dollars in Millions)											
Contribution Information											
	2013	2012	2011	2010	2009	2008	2007*	2006	2005	2004	
Employer Rate	4.78%	4.64%	4.54%	4.54%	4.44%	4.34%	4.56%	4.66%	4.86%	4.57%	
State Rate	3.19%	3.10%	3.03%	3.03%	2.96%	2.89%	3.04%	3.11%	3.24%	3.03%	
Employee Rate	7.97%	7.74%	7.57%	7.57%	7.40%	7.23%	7.60%	7.77%	8.10%	7.60%	
Funded Status											
Projected Unit Credit Liability	\$6,859	\$6,071	\$5,576	\$5,078	\$4,349	\$3,786	\$3,386	\$3,323	\$2,932	\$2,521	
Market Value of Assets	\$7,637	\$6,640	\$6,366	\$5,081	\$4,309	\$5,315	\$5,185	\$4,339	\$3,614	\$2,984	
Actuarial Value of Assets	\$7,862	\$7,222	\$6,621	\$6,043	\$5,564	\$5,053	\$4,360	\$3,844	\$3,329	\$2,947	
Unfunded Liability	(\$1,003)	(\$1,150)	(\$1,044)	(\$965)	(\$1,215)	(\$1,266)	(\$974)	(\$521)	(\$397)	(\$426)	
Funded Ratio	114.6%	118.9%	118.7%	119.0%	127.9%	133.4%	128.8%	115.7%	113.5%	116.9%	
Participant Data											
Number of Actives	16,687	16,720	16,805	16,775	16,951	16,626	16,099	15,718	15,168	14,754	
Total Annual Salaries	\$1,597	\$1,560	\$1,535	\$1,490	\$1,443	\$1,345	\$1,234	\$1,172	\$1,092	\$1,020	
Number of Terminated Vested	698	689	655	781	672	649	629	597	570	521	
Number of Terminated, Not Vested	1,565	1,558	1,617	1,707	1,663	1,531	1,433	1,362	1,285	1,233	
Number of Retirees and Beneficiaries	2,782	2,344	2,015	1,639	1,367	1,134	924	779	574	432	
Total Annual Benefits	\$105	\$82	\$65	\$49	\$38	\$29	\$22	\$17	\$11	\$8	
Assumptions											
Valuation Interest Rate	7.50%	7.50%	7.50%	8.00%	8.00%	8.00%	5.94%	8.00%	8.00%	8.00%	
Salary Increase	5.30%	5.43%	5.61%	6.55%	6.61%	6.61%	5.49%	7.40%	7.40%	7.60%	
Inflation**	3.00%	3.00%	3.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	
Growth in Membership	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	0.94%	1.25%	1.25%	1.25%	
Actuarial Experience											
Return on Market Value	12.31%	1.45%	21.08%	12.99%	(22.64%)	(1.33%)	16.61%	15.77%	17.55%	13.64%	
Return on Actuarial Value	6.41%	6.25%	6.15%	4.84%	5.72%	11.04%	10.03%	10.80%	9.30%	4.10%	
Salary Increase	3.91%	3.22%	3.48%	5.35%	6.69%	7.65%	4.31%	5.50%	5.90%	5.20%	
Inflation	2.54%	3.17%	0.78%	0.44%	4.48%	3.79%	3.73%	3.02%	1.57%	1.41%	
Growth in Membership	(1.32%)	(0.87%)	(0.12%)	0.17%	1.53%	2.62%	1.83%	2.66%	1.85%	0.33%	
COLA***	2.54%-3%	3.00%	0.78%-3%	0.44%-3%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	

*For the 2007 valuation, the salary, interest, and growth rates were not annualized. They reflect the actual valuation period of nine months.

**Based on the assumption for prior year's CPI: Urban Wage Earners & Clerical Workers, Seattle-Tacoma-Bremerton, WA - All Items.

***COLA is based on the CPI (3% maximum per year).

Glossary

Actuarial Accrued Liability

Computed differently under different funding methods, the actuarial accrued liability generally represents the portion of the present value of fully projected benefits attributable to service credit earned (or accrued) as of the valuation date.

Actuarial Gain or Loss

A pension plan incurs actuarial gains or losses when the actual experience of the pension plan does not exactly match assumptions. For example, an actuarial gain would occur if assets earned 10 percent for a given year since the assumed interest rate in the valuation is 7.5 percent.

Actuarial Value of Assets

The value of pension plan investments and other property used by the actuary for the purpose of an actuarial valuation (sometimes referred to as valuation assets). Actuaries often select an asset valuation method that smooths the effects of short-term volatility in the market value of assets.

Entry Age Normal (EAN) Funding Method

The EAN funding method is a standard actuarial funding method. The annual cost of benefits under EAN is comprised of two components:

- ◆ Normal cost; plus
- ◆ Amortization of the unfunded actuarial accrued liability.

The normal cost is determined on an individual basis, from a member's age at plan entry, and is designed to be a level percentage of pay throughout a member's career.

Funded Ratio/Status

The ratio of a plan's current assets to the present value of earned pensions. There are several acceptable methods of measuring a plan's assets and liabilities. The methods and assumptions used can vary based on the purpose of the measurement.

Market Value of Assets (MVA)

The market value of assets is the value of the pension fund based on the value of the assets as they would trade on an open market, including accrued income and expenses.

Normal Cost

Computed differently under different funding methods, the normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year. The employer normal cost equals the

total normal cost of the plan reduced by employee contributions.

Present Value of Fully Projected Benefits

Computed by projecting the total future benefit payments from the plan, using actuarial assumptions (i.e., probability of death or retirement, salary increases, etc.), and discounting the payments to the valuation date using the valuation interest rate to determine the present value (today's value).

Present Value of Future Salaries (PVFS)

The value of future expected salaries discounted with interest to the valuation date.

Projected Unit Credit (PUC) Actuarial Cost Method

The PUC cost method is a standard actuarial funding method. The annual cost of benefits under PUC is comprised of two components:

- ♦ Normal cost; plus
- ♦ Amortization of the unfunded actuarial accrued liability.

The PUC normal cost is the estimated present value of projected benefits current plan members will earn in the year following the valuation date.

Unfunded Actuarial Accrued Liability (UAAL)

The excess, if any, of the actuarial accrued liability over the actuarial value of assets. In other words, the present value of benefits earned to date that not covered by current plan assets.

WASHINGTON STATE

Law Enforcement Officers'
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**State of Washington
Pension Funding Council
LEOFF 2 Board**

Actuarial Audit of June 30, 2013 Actuarial Valuation
and
2007-2012 Demographic Experience Study

Prepared by:

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October 6, 2014

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Legislative Services Manager
Department of Retirement Services
P.O. Box 48380
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Mr. Steve Nelsen
Executive Director
LEOFF Plan 2 Retirement Board
P.O. Box 40918
Olympia, WA 98504

Re: Actuarial Audit Report

Dear Dave and Steve,

The enclosed report presents the findings and comments resulting from a detailed review of the June 30, 2103 actuarial valuation and 2007-2012 Experience Study performed by the Office of the State Actuary (OSA) for the Pension Funding Council (PFC) and the LEOFF 2 Board. An overview of our major findings is included in the Executive Summary section of the report. More detailed commentary on our review process is included in the latter sections.

All calculations for the actuarial valuation are based on Revised Code of Washington (RCW) and the actuarial assumptions proposed by the OSA based on its experience study for the June 30, 2013 actuarial valuation. As discussed in our report, we believe the package of actuarial assumptions and methods is reasonable (taking into account the experience of Washington State Public Retirement Systems and reasonable expectations). Nevertheless, the emerging costs will vary from those presented in this report to the extent that actual experience differs from that projected by the actuarial assumptions. Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as the following:

- Plan experience differing from the actuarial assumptions,
- Future changes in the actuarial assumptions,
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as potential additional contribution requirements due to changes in the plan's funded status), and
- Changes in the plan provisions or accounting standards.

Due to the scope of this assignment, we did not perform an analysis of the potential range of such measurements.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the OSA's staff. This information includes information supplied to the OSA by the Department of Retirement Systems (DRS) and the Washington State Investment Board (WSIB). This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the audit results are dependent on

This work product was prepared solely for the PFC and the LEOFF 2 Retirement Board for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

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 which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

Milliman's work product was prepared exclusively for the Pension Funding Council and the LEOFF 2 Board for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the operations of the Washington State Public Retirement Systems, and uses DRS's census data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

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

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

We would like to express our appreciation to the OSA's staff for their assistance in supplying the data and information on which this report is based.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We respectfully submit the following report, and we look forward to discussing it with you.

Sincerely,



Mark C. Olleman, FSA, EA, MAAA
Consulting Actuary



Nick J. Collier, ASA, EA, MAAA
Consulting Actuary



Daniel R. Wade, FSA, EA, MAAA
Consulting Actuary
MCO/NJC/DRW/nlo

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Pension Funding Council and LEOFF 2 Board Actuarial Audit of 2013 Actuarial Valuation and 2007-2012 Demographic Experience Study

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Pension Funding Council and LEOFF 2 Board Actuarial Audit of 2013 Actuarial Valuation and 2007-2012 Demographic Experience Study

Section 1 Summary of the Findings



Purpose and Scope of the Actuarial Audit

This actuarial audit reviews the June 30, 2013 actuarial valuation and the 2007-2012 Demographic Experience Study performed by the Office of the State Actuary (OSA). The purpose of this audit is to verify that the results of the valuation are accurate and that the assumptions the valuation is based upon are reasonable. The following tasks were performed in this audit:

- Evaluation of the data used in the valuation
- Full independent replication of the key valuation results
- Evaluation of calculations made for the Experience Study and reasonableness of the assumptions used in the valuation
- Analysis of valuation results and reconciliation of material differences (if any)
- Analysis of the written work product

Audit Conclusion

Overall

The results of this audit are very positive. Specifically, we want to highlight the following:

- **Strong Contributions toward Funding.** Washington State has funding that is superior to that of most statewide systems. The use of the aggregate actuarial cost method, along with relatively short amortization periods for the Plans 1 limit the contributions deferred to future generations in comparison to what is done in most other states.
- **Reasonable Assumptions:** We believe that all of the recommended assumptions used to value liabilities are reasonable. The recommended use of Scale BB for projecting future mortality improvements puts the state ahead of most other states when it comes to anticipating the impact of mortality improvement.
- **Accurate Calculations:** Our independent calculations matched OSA's closely in all material aspects of the valuation.

Experience Study

Based upon our review of the Experience Study for the 2007-2012 period, we found the package of recommended assumptions is reasonable and appropriate. We have some comments for OSA, the Pension Funding Council (PFC), and the LEOFF 2 Board to consider in the future. We are not proposing any changes be reflected in the 2013 actuarial valuation.

Actuarial Valuation

Based upon our review of the June 30, 2013 actuarial valuation, we found the actuarial work performed by OSA was reasonable, appropriate, and accurate. We matched the assets, liabilities and contribution rates calculated by OSA closely.

We have made suggestions regarding the written communication in the actuarial valuation report, particularly with respect to the explanation of the funding calculations, which are quite complex for the Washington State Public Retirement Systems. We also have changes to be considered for the next valuation.

Statement of Key Findings

Membership Data

We performed tests on both the raw data supplied by the Department of Retirement Systems (DRS) and the processed data used by the OSA in the June 30, 2013 actuarial valuation. We feel that there is an excellent match between the data supplied by DRS and the data used by OSA. Based on this review, we feel the individual member data used is complete. A summary is shown in the chart below:

All Plans in Aggregate			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	291,345	291,345	100.0%
Total Salaries (millions)	\$ 16,525	\$ 16,525	100.0%
Average Age	47.7	47.7	100.0%
Average Service	12.4	12.4	100.0%
Average Projected Compensation	\$ 56,710	\$ 56,715	100.0%
Retirees and Survivors			
Total Number	150,145	150,140	100.0%
Average Monthly Pension	\$ 1,803	\$ 1,800	100.2%
Number of New Service Retirees	9,474	9,490	99.8%
Avg Monthly Pension for New Svc Retirees	\$ 1,792	\$ 1,786	100.4%
Terminated Members			
Total Number Vested	53,356	53,361	100.0%
Total Number Non-Vested	118,332	118,333	100.0%

Actuarial Value of Assets

We have reviewed the calculations for the actuarial value of assets used for each plan in the June 30, 2013 valuation. We found the calculations to be reasonable and the methodology to be appropriate and in compliance with Actuarial Standards of Practice. The actuarial value of assets is discussed in more detail in Section 3 of this report

Statement of Key Findings

Actuarial Liabilities

We independently calculated the Present Value of Benefits, Normal Cost, and Actuarial Accrued Liability under the Projected Unit Credit method for all systems. We found that all significant benefit provisions were accounted for in an accurate manner, the actuarial assumptions and methods are being applied as reported, and that our total liabilities matched those calculated by OSA closely. This was true both in aggregate and by individual plan.

A summary of the results for each system is shown in the chart below. Further breakdowns are shown in Section 4.

	OSA	Milliman	Ratio OSA/Milliman
Present Value All Future Benefits (in \$Millions)			
PERS 1	\$ 13,012.2	\$ 12,957.2	100.4%
PERS 2/3	33,403.9	33,192.7	100.6%
TRS 1	9,490.9	9,532.3	99.6%
TRS 2/3	12,025.1	12,063.1	99.7%
SERS 2/3	4,494.9	4,495.5	100.0%
PSERS 2	595.3	590.8	100.8%
LEOFF 1	4,420.3	4,430.4	99.8%
LEOFF 2	10,313.8	10,295.7	100.2%
WSPRS	1,131.8	1,129.8	100.2%
Total PVB	\$ 88,888.2	\$ 88,687.5	100.2%

Funding

We reviewed the funding methods and their application. We find them reasonable and consistent with the Actuarial Standards of Practice and the objectives stated in RCW 41.45.010. Based on the Systems' funding methods and assumptions, we believe the employer contribution rates for each membership class are appropriately calculated.

Statement of Key Findings

Funding (continued)

When we used the liabilities, present value of future salaries, and actuarial assets calculated by OSA, we matched OSA's contribution rate calculations exactly. When we used the liabilities, present value of future salaries, and actuarial assets calculated by Milliman, the results were close to OSA's calculated contribution rates as shown below.

	OSA	Milliman	Difference OSA - Milliman
Employer Contribution Rates (Percent of Member Pay)			
PERS 1	5.18%	5.12%	0.06%
PERS 2/3	7.11%	7.04%	0.07%
TRS 1	6.91%	7.02%	-0.11%
TRS 2/3	7.56%	7.70%	-0.14%
SERS 2/3	7.70%	7.69%	0.01%
PSERS 2	6.89%	6.88%	0.01%
WSPRS	8.79%	8.43%	0.36%
LEOFF 2*	5.31%	5.31%	0.00%

** Based on a potential LEOFF 2 contribution rate calculation structure of 100% of EANC and the employers' 30% share.*

The largest difference was observed for WSPRS. We reviewed this calculation and concluded that this difference was just the accumulation of some small differences and that it is reasonable.

We have a recommended change for future valuations in the calculation of the entry age for use in the Entry Age Normal Cost (EANC) calculation under the Entry Age actuarial cost method. This recommended change to the Entry Age Normal Cost has an impact on the minimum contribution rates, which only apply for the LEOFF Plan 2 for the June 2013 valuation, but could have a small impact on the other Plans in future valuations.

Funding is discussed in more detail in Section 5.

Statement of Key Findings

Actuarial Assumptions (Economic)

We reviewed the economic assumptions used in the valuation and found them to be reasonable. The economic assumptions used were adopted based on the OSA's 2013 Report on Financial Condition and Economic Experience Study completed in August 2013. While a full audit of that report is beyond the scope of our assignment, we feel an actuarial audit would be incomplete without a review of the important economic assumptions used in the actuarial valuation.

We have the following comments regarding the economic assumptions:

- Our analysis supports the expected rate of return of 7.50% recommended by the OSA. While the current assumption of 7.80% used for non-LEOFF 2 plans is also reasonable, we believe that 7.50% is a more realistic assumption and recommend that the investment return assumption continue to decrease. 7.50% (or lower) is consistent with the recommendations we are currently making to our retained clients.
- It should be noted that there are recent revisions to Actuarial Standard of Practice No. 27 (ASOP No. 27) that will be effective for the June 30, 2015 valuation and later. These revisions will impact how an actuary determines a reasonable assumption. In particular, the current standard allows for the selection of an assumption that falls within the best-estimate range, whereas the new standard narrows this to be considered reasonable only if it has no significant bias (i.e., it is neither significantly optimistic nor pessimistic). The standard does allow for a provision for adverse deviation. Ultimately, we believe that an assumption that was on the high end of the best-estimate range under the current standard may not be reasonable under the new standard. This could impact the selection of the economic assumptions and should be considered by the OSA at the time of the 2015 actuarial valuation.
- The inflation assumption of 3.00% is reasonable, as is the real wage growth assumption of 0.75% for productivity. The general salary increase assumption of 3.75% is the sum of these two assumptions.

Statement of Key Findings

Actuarial Assumptions (Economic) (continued)

- As prescribed, OSA assumes annual growth in active membership varying by plan from 0.80% to 0.95. Most public sector pension plans assume no future growth in system membership. A growth assumption greater than 0% is not allowed under current GASB standards for accounting and financial disclosure. While a zero growth assumption is not required for contribution rate calculation purposes, we believe that zero growth is the best assumption, as discussed at the end of Section 6 of this report. Please note that this assumption only impacts the amortization of the Plan 1 Unfunded Actuarial Accrued Liability (UAAL) over 10 years. The small membership growth assumption over the 10-year amortization period has a modest impact on the calculated contribution rates.

Economic assumptions are discussed in more detail in Section 6.

Actuarial Assumptions (Demographic)

We performed an audit of the calculations for the 2007-2012 Demographic Experience Study for the Washington State Public Retirement Systems. Based on this analysis, we reviewed the demographic assumptions used in the valuation and found them to be reasonable. We are making a few comments to consider for the next Experience Study, as shown at the end of this section, and discussed further in Section 7.

Review of Previous Reports and Recommendations from Prior Audit

Because the final 2007-2012 Experience Study and 2013 Actuarial Valuation reports have not been completed at this time, we base the comments in Section 8 on the previous reports. Overall, we found OSA's reports to be very thorough. We have made a few comments for consideration for the upcoming reports that may enhance an outside reader's understanding. All of these comments are related to additional disclosure, and, if implemented, none would have an impact on the contribution rates.

We have also reviewed the comments from the prior actuarial audit and reported on the incorporation of those comments. Most of the recommendations were implemented. Of those that have not yet been implemented, we do not consider any of them to be material.

Recommendations and Other Considerations

We are not recommending any changes to the current actuarial valuation or experience study reports. We have provided some recommendations for OSA, PFC, and the LEOFF 2 Board to consider in the future, as listed below and discussed in further detail in the body of this report.

Recommended Changes to the 2013 Valuation

None

Recommended Changes for Future Valuations with a Material Financial Impact

None

Recommended Changes for Future Valuations and Experience Studies with a Non-Material Financial Impact

We recommend that the following changes be considered. The recommendations are listed in rough descending order of potential magnitude.

- **Calculation of Entry Age (see end of Section 4).** For the next valuation, we recommend Entry Age be calculated using service rounded to the nearest year.
- **Salary Used in Plan 1 Amortization (see end of Section 5).** Exclude merit increases from the projection of the first year salary used in the Plan 1 amortization calculation.
- **Weighting of Entry Age Normal Cost (EANC) (see end of Section 4).** Revise the weighting of the EANC rate for Plans 2 and 3 to be based on the current membership.
- **Medical Benefits for Future Disabilities (see end of Section 8).** Revise the calculation of medical benefits for future disabilities to reflect projected increases in medical costs that occur after retirement.
- **Non-Duty Disability Benefit in Year Before Retirement Eligibility for LEOFF 2 (see end of Section 4).** Revise the calculation of the end-of-year portion of the age 49 non-duty disability benefit.
- **OPEB Costs for Future Disabled Members after Medicare Eligibility (see end of Section 7):** Review the treatment of projected pre-Medicare benefits at ages 65 and later for future disabilities.
- **Recommendations from Prior Audit (see end of Section 8):** Most recommendations from the prior audit were addressed, but a few have not yet been addressed. Those not addressed had no material financial impact.

Recommendations and Other Considerations (continued)

Recommended Changes for Future Valuations and Experience Studies with No Direct Financial Impact

We recommend that OSA consider the following actions for future valuations and the experience studies they are based on:

- **Mortality Analysis by Benefit Amount (see Mortality sub-heading in Section 7).** Analyze retired mortality rates by benefit amount for future experience studies and factor that analysis into the recommended assumption.
- **Immediate vs Deferred Retirement for Disabilities with 30 Years of Service (see Rates of Disability sub-heading in Section 7).** Review the assumption for whether a PERS, TRS and SERS member with 30 years of service that is less than age 55 takes an immediate disability retirement or a deferred service retirement.
- **Consider excluding people eligible for early retirement from termination analysis (see Rates of Termination sub-heading in Section 7).** Consider excluding people eligible for early retirement from the termination analysis at the time of the next experience study.
- **Consider adding Portability Assumption (see Other Assumptions sub-heading in Section 7).** No assumption is currently made to reflect this. It is our understanding that OSA will research this for the 2014 valuation. This only impacts those who are covered by other pension plans at first-class cities in the state of Washington.
- **Additional Information in Report (see Comments Regarding OSA's Reports in Section 8).** Provide additional disclosure information in reports, particularly regarding the funding of the systems.

Pension Funding Council and LEOFF 2 Board Actuarial Audit of 2013 Actuarial Valuation and 2007-2012 Demographic Experience Study

Section 2 Membership Data

Audit Conclusion



We performed tests on both the raw data supplied by the Department of Retirement Systems (DRS) and the processed data used by the Office of the State Actuary (OSA) in the June 30, 2013 actuarial valuation. We found that the data used by OSA was consistent with the data supplied by DRS.

We also reviewed the data used by the OSA for the demographic experience study for reasonableness and consistency, although we did not do a full audit.

Based on this review, we feel the individual member data used in both projects is appropriate and complete.

Comments

Overall, the data process appears to be thorough and accurate. We would add the following comments:

- Raw Data: OSA provided us with the same files that were given to them by DRS for use in the actuarial valuation.

Completeness: The data contained all the necessary fields to perform the actuarial valuation.

Quality: Although we did not audit the data at the source, we performed some independent checks to confirm the overall reasonableness of the data. We compared the total retiree and beneficiary benefit amounts with the actual benefit payments made, as reported in the asset statements.

We also compared the total active member compensation on the DRS data with the estimated active payroll for 2012-2013. The actual member contribution amounts in the asset statements provided by DRS were divided by the applicable contribution rates for the prior year for each plan. This results in an estimated payroll for each plan. Based on this analysis, we found the compensation data to be reasonable.

Comments (continued)

- Parallel Data Processing: We performed independent edits on the raw data provided by DRS and then compared our results with the valuation data used by OSA, as summarized in the preliminary participant data summary on the OSA's website. We found our results to be consistent.

Our results do not match exactly. This is understandable, as some adjustments were made to annualize salary for those with less than one year of service during the valuation period and other adjustments were made for a few data elements outside of the expected range. Overall, each key data component matched well within an acceptable level and we believe the individual member data used by the OSA was appropriate for valuation purposes.

A summary of the data for each plan is shown in Exhibit 2-1. In all cases, the summarized totals for our edited data matched those for OSA's valuation data closely. The "Milliman" column reflects the DRS data after adjustments by Milliman. The "OSA" column reflects the actual data used in the OSA's valuation as summarized in the preliminary participant data summary on the OSA's website.

**Exhibit 2-1
Member Statistics as of June 30, 2013**

All Plans				
	OSA	Milliman	Ratio OSA/Milliman	
Active Members				
Total Number	291,345	291,345	100.0%	
Total Salaries (millions)	\$ 16,525	\$ 16,525	100.0%	
Average Age	47.7	47.7	100.0%	
Average Service	12.4	12.4	100.0%	
Average Projected Compensation	\$ 56,710	\$ 56,715	100.0%	
Retirees and Survivors				
Total Number	150,145	150,140	100.0%	
Average Monthly Pension	\$ 1,803	\$ 1,800	100.2%	
Number of New Service Retirees	9,474	9,490	99.8%	
Avg Monthly Pension for New Svc Retirees	\$ 1,792	\$ 1,786	100.4%	
Terminated Members				
Total Number Vested	53,356	53,361	100.0%	
Total Number Non-Vested	118,332	118,333	100.0%	

Exhibit 2-1 (continued)
Member Statistics as of June 30, 2013

PERS 1			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	5,653	5,653	100.0%
Total Salaries (millions)	\$ 318	\$ 318	100.0%
Average Age	62.2	62.2	100.0%
Average Service	24.5	24.5	100.0%
Average Projected Compensation	\$ 56,224	\$ 56,212	100.0%
Retirees and Survivors			
Total Number	51,860	51,860	100.0%
Average Monthly Pension	\$ 1,892	\$ 1,885	100.4%
Number of New Service Retirees	1,209	1,216	99.4%
Avg Monthly Pension for New Svc Retirees	\$ 2,350	\$ 2,338	100.5%
Terminated Members			
Total Number Vested	1,384	1,384	100.0%
Total Number Non-Vested	3,810	3,810	100.0%

PERS 2			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	115,751	115,751	100.0%
Total Salaries (millions)	\$ 6,759	\$ 6,760	100.0%
Average Age	48.4	48.4	100.0%
Average Service	12.6	12.6	100.0%
Average Projected Compensation	\$ 58,388	\$ 58,398	100.0%
Retirees and Survivors			
Total Number	31,329	31,329	100.0%
Average Monthly Pension	\$ 1,256	\$ 1,255	100.1%
Number of New Service Retirees	3,782	3,785	99.9%
Avg Monthly Pension for New Svc Retirees	\$ 1,731	\$ 1,729	100.1%
Terminated Members			
Total Number Vested	25,383	25,383	100.0%
Total Number Non-Vested	97,381	97,382	100.0%

Exhibit 2-1 (continued)
Member Statistics as of June 30, 2013

PERS 3			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	29,302	29,302	100.0%
Total Salaries (millions)	\$ 1,581	\$ 1,581	100.0%
Average Age	43.6	43.6	100.0%
Average Service	8.7	8.7	100.0%
Average Projected Compensation	\$ 53,948	\$ 53,956	100.0%
Retirees and Survivors			
Total Number	2,139	2,139	100.0%
Average Monthly Pension	\$ 723	\$ 722	100.1%
Number of New Service Retirees	375	376	99.7%
Avg Monthly Pension for New Svc Retirees	\$ 896	\$ 890	100.7%
Terminated Members			
Total Number Vested	4,280	4,280	100.0%
Total Number Non-Vested	N/A	N/A	100.0%

TRS 1			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	2,393	2,393	100.0%
Total Salaries (millions)	\$ 183	\$ 183	100.0%
Average Age	63.0	63.0	100.0%
Average Service	30.1	30.1	100.0%
Average Projected Compensation	\$ 76,549	\$ 76,522	100.0%
Retirees and Survivors			
Total Number	35,912	35,912	100.0%
Average Monthly Pension	\$ 2,060	\$ 2,057	100.1%
Number of New Service Retirees	717	718	99.9%
Avg Monthly Pension for New Svc Retirees	\$ 2,973	\$ 2,969	100.1%
Terminated Members			
Total Number Vested	391	391	100.0%
Total Number Non-Vested	453	453	100.0%

Exhibit 2-1 (continued)
Member Statistics as of June 30, 2013

TRS 2			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	12,071	12,071	100.0%
Total Salaries (millions)	\$ 740	\$ 740	100.0%
Average Age	44.5	44.5	100.0%
Average Service	10.1	10.1	100.0%
Average Projected Compensation	\$ 61,320	\$ 61,317	100.0%
Retirees and Survivors			
Total Number	3,445	3,445	100.0%
Average Monthly Pension	\$ 1,612	\$ 1,612	100.0%
Number of New Service Retirees	409	408	100.2%
Avg Monthly Pension for New Svc Retirees	\$ 2,014	\$ 2,013	100.0%
Terminated Members			
Total Number Vested	2,330	2,330	100.0%
Total Number Non-Vested	4,812	4,812	100.0%

TRS 3			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	51,471	51,471	100.0%
Total Salaries (millions)	\$ 3,483	\$ 3,482	100.0%
Average Age	46.1	46.1	100.0%
Average Service	13.7	13.7	100.0%
Average Projected Compensation	\$ 67,664	\$ 67,656	100.0%
Retirees and Survivors			
Total Number	4,863	4,863	100.0%
Average Monthly Pension	\$ 903	\$ 903	100.0%
Number of New Service Retirees	1,028	1,034	99.4%
Avg Monthly Pension for New Svc Retirees	\$ 1,098	\$ 1,091	100.6%
Terminated Members			
Total Number Vested	7,102	7,102	100.0%
Total Number Non-Vested	N/A	N/A	100.0%

Exhibit 2-1 (continued)
Member Statistics as of June 30, 2013

SERS 2			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	21,760	21,760	100.0%
Total Salaries (millions)	\$ 623	\$ 623	100.0%
Average Age	51.1	51.1	100.0%
Average Service	10.8	10.8	100.0%
Average Projected Compensation	\$ 28,620	\$ 28,630	100.0%
Retirees and Survivors			
Total Number	5,084	5,084	100.0%
Average Monthly Pension	\$ 780	\$ 780	100.0%
Number of New Service Retirees	669	668	100.1%
Avg Monthly Pension for New Svc Retirees	\$ 942	\$ 942	100.0%
Terminated Members			
Total Number Vested	5,190	5,190	100.0%
Total Number Non-Vested	8,861	8,861	100.0%

SERS 3			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	30,535	30,535	100.0%
Total Salaries (millions)	\$ 892	\$ 892	100.0%
Average Age	50.6	50.6	100.0%
Average Service	10.7	10.7	100.0%
Average Projected Compensation	\$ 29,195	\$ 29,197	100.0%
Retirees and Survivors			
Total Number	3,995	3,995	100.0%
Average Monthly Pension	\$ 410	\$ 410	100.0%
Number of New Service Retirees	770	774	99.5%
Avg Monthly Pension for New Svc Retirees	\$ 466	\$ 463	100.6%
Terminated Members			
Total Number Vested	6,398	6,398	100.0%
Total Number Non-Vested	N/A	N/A	100.0%

Exhibit 2-1 (continued)
Member Statistics as of June 30, 2013

PSERS 2			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	4,513	4,513	100.0%
Total Salaries (millions)	\$ 253	\$ 253	100.0%
Average Age	40.4	40.4	100.0%
Average Service	4.8	4.8	100.0%
Average Projected Compensation	\$ 56,075	\$ 56,084	100.0%
Retirees and Survivors			
Total Number	43	43	100.0%
Average Monthly Pension	\$ 358	\$ 358	100.0%
Number of New Service Retirees	16	16	100.0%
Avg Monthly Pension for New Svc Retirees	\$ 511	\$ 511	100.0%
Terminated Members			
Total Number Vested	119	119	100.0%
Total Number Non-Vested	1,383	1,383	100.0%

LEOFF 1			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	143	143	100.0%
Total Salaries (millions)	\$ 15	\$ 15	100.0%
Average Age	61.9	61.9	100.0%
Average Service	38.2	38.2	100.0%
Average Projected Compensation	\$ 103,362	\$ 103,362	100.0%
Retirees and Survivors			
Total Number	7,729	7,729	100.0%
Average Monthly Pension	\$ 3,841	\$ 3,841	100.0%
Number of New Service Retirees	42	42	100.0%
Avg Monthly Pension for New Svc Retirees	\$ 7,106	\$ 7,106	100.0%
Terminated Members			
Total Number Vested	1	1	100.0%
Total Number Non-Vested	35	35	100.0%

Exhibit 2-1 (continued)
Member Statistics as of June 30, 2013

LEOFF 2				
	OSA	Milliman	Ratio OSA/Milliman	
Active Members				
Total Number	16,687	16,687	100.0%	
Total Salaries (millions)	\$ 1,597	\$ 1,597	100.0%	
Average Age	43.5	43.5	100.0%	
Average Service	14.6	14.6	100.0%	
Average Projected Compensation	\$ 95,694	\$ 95,708	100.0%	
Retirees and Survivors				
Total Number	2,782	2,782	100.0%	
Average Monthly Pension	\$ 3,151	\$ 3,151	100.0%	
Number of New Service Retirees	402	403	99.8%	
Avg Monthly Pension for New Svc Retirees	\$ 4,091	\$ 4,082	100.2%	
Terminated Members				
Total Number Vested	698	698	100.0%	
Total Number Non-Vested	1,565	1,565	100.0%	

WSPRS 1				
	OSA	Milliman	Ratio OSA/Milliman	
Active Members				
Total Number	657	657	100.0%	
Total Salaries (millions)	\$ 54	\$ 54	100.0%	
Average Age	45.6	45.6	100.0%	
Average Service	18.9	18.9	100.0%	
Average Projected Compensation	\$ 81,465	\$ 81,433	100.0%	
Retirees and Survivors				
Total Number	964	959	100.5%	
Average Monthly Pension	\$ 3,881	\$ 3,875	100.2%	
Number of New Service Retirees	55	50	110.0%	
Avg Monthly Pension for New Svc Retirees	\$ 4,194	\$ 4,105	102.2%	
Terminated Members				
Total Number Vested	70	75	93.3%	
Total Number Non-Vested	18	18	100.0%	

Comments
(continued)

Exhibit 2-1 (continued)
Member Statistics as of June 30, 2013

WSPRS 2			
	OSA	Milliman	Ratio OSA/Milliman
Active Members			
Total Number	409	409	100.0%
Total Salaries (millions)	\$ 27	\$ 27	100.0%
Average Age	32.5	32.6	99.7%
Average Service	5.7	5.7	100.0%
Average Projected Compensation	\$ 65,058	\$ 65,060	100.0%
Retirees and Survivors			
Total Number	-	-	100.0%
Average Monthly Pension	\$ -	\$ -	100.0%
Number of New Service Retirees	-	-	100.0%
Avg Monthly Pension for New Svc Retirees	\$ -	\$ -	100.0%
Terminated Members			
Total Number Vested	10	10	100.0%
Total Number Non-Vested	14	14	100.0%

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**Pension Funding Council and LEOFF 2 Board
Actuarial Audit of 2013 Actuarial Valuation
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Section 3 Actuarial Value of Assets

Audit Conclusion



We have reviewed the calculations for the actuarial value of assets used for each plan in the June 30, 2013 valuation. We found the calculations to be reasonable and the methodology to be appropriate and in compliance with Actuarial Standards of Practice.

Comments

The method used to determine the actuarial value of assets smoothes investment gains and losses by reflecting a portion of the difference between the actual market value of assets and the expected market value for every fiscal year. For each year and each plan, a base for smoothed recognition over time is established equal to that difference.

The larger the deviation from expectation, the longer the recognition period for that base, with a level dollar amount recognized for each year of that period. For the largest deviations (more than 7% above or below the assumption), the gains or losses are recognized over eight years, whereas when the actual return is within 1% of the assumption, the gain or loss is recognized immediately. Additionally, a “corridor” is applied to make sure that the smoothed actuarial value of assets stays within 30% of the market value of assets.

Although it is unusual to recognize investment gains and losses over different periods, we believe it is a reasonable approach since the maximum smoothing period is reasonable and the method allows the actuarial value of assets to converge to market more rapidly if gains and losses are small.

We independently calculated the actuarial value of assets for each plan based on financial information provided by the Department of Retirement Systems (DRS) and the Washington State Investment Board (WSIB). DRS and WSIB both provide market values of assets by plan. Note that there are small differences between the values provided by DRS and WSIB. Per our conversation with OSA, the DRS values are used for the market value of assets. The WSIB data is only used to determine the monthly cash flows (contributions minus benefit payments) needed to calculate the expected value of assets.

**Comments
(continued)**

We used the information from DRS, WSIB, along with the outstanding gain/loss bases as published in the 2012 Actuarial Valuation Report. With this information and the asset methodology, our independent calculations were within 0.1% of the OSA's calculation for every plan.

Please see the following exhibit for a comparison.

**Exhibit 3-1
Comparison of Actuarial Value of Assets by Plan**

AVA (millions)				
		OSA	Milliman	Ratio OSA/Milliman
PERS				
Plan 1	\$	8,053	\$ 8,052	100.0%
Plan 2/3 (DB)	\$	24,335	\$ 24,333	100.0%
TRS				
Plan 1	\$	6,717	\$ 6,716	100.0%
Plan 2/3 (DB)	\$	8,406	\$ 8,405	100.0%
SERS				
Plan 2/3 (DB)	\$	3,335	\$ 3,335	100.0%
PSERS				
Plan 2	\$	224	\$ 224	100.0%
LEOFF				
Plan 1	\$	5,516	\$ 5,516	100.0%
Plan 2	\$	7,862	\$ 7,862	100.0%
WSPRS				
Plan 1 & 2	\$	1,009	\$ 1,010	99.9%

As discussed above, OSA uses an asset smoothing method to reduce volatility. A five-year smoothing method is the most commonly used method among large public retirement systems. OSA uses a variable length of smoothing period, with eight years as the longest possible period. We believe the use of an asset smoothing method is appropriate, and we generally recommend this to our clients, particularly in systems where contribution rates change annually or biennially.

Comments (continued)

When a smoothing method is used, the actuarial value of assets will deviate from the market value of assets. Many public retirement systems apply a corridor so that the actuarial value of assets is not allowed to deviate from the market value by more than a certain percentage. The potential downside of using a corridor is that it can cause significant contribution rate volatility when the assets are outside the corridor. OSA applies a corridor of 30%.

Typically, the longer the recognition period, the more important it is seen to have a corridor. We believe that the eight-year smoothing period, coupled with the application of the corridor, is in compliance with ASOP No. 44, the actuarial standard of practice for the selection and use of asset valuation methods for pension valuations.

The Conference of Consulting Actuaries (CCA) has drafted a white paper entitled *Actuarial Funding Policies and Practices for Public Pension Plans* which includes guidelines for asset smoothing methodologies. This paper was drafted in part as a response to the void left by the fact that the soon to be applicable statements of the Governmental Accounting Standards Board (GASB) no longer specify the parameters for an Annual Required Contribution (ARC). The CCA was comprised of a group of public plan actuaries from the major firms in public plan practice who met more than 24 times over two years.

OSA's method of smoothing with recognition periods eight years or less, along with a 30% corridor, falls in the "Acceptable Practices" category under these draft guidelines (categories described below for reference). OSA's method is almost inside of the CCA "Model Practices" category. That could be achieved with a smoothing period of five years or fewer with a 50% corridor or a smoothing period of seven years or fewer with a 40% corridor. Note that the "Model Practices" are not intended to be "best practices," but are the ones considered to be most consistent with the Level Cost Allocation Model. Therefore, this is not a recommendation to change, just an observation.

OSA's method is consistent with all of the CCA specific policy objectives and considerations for an asset smoothing method. Its consistency with the primary objectives is shown by the following:

- All components of the asset method are specified: return subject to smoothing, smoothing period, corridor, and method of recognizing deferred amounts.
- It is unbiased compared to market value.
- It does not selectively reset to market when market value is greater than actuarial value.

Comments (continued)

- Realized and unrealized gains and losses are treated the same.
- It is consistent with the Actuarial Standard of Practice No. 44 concept of being likely to return to market in a reasonable period and likely to stay within a reasonable range of market value.

We feel that the OSA's method is reasonable and consistent with the policy objectives of the State which are described in RCW 41.45.010 as being "to provide a dependable and systematic process for funding the benefits provided to members and retirees" of the Washington State Retirement Systems.

For reference, the categories in the CCA guidelines are shown below.

Categories Under CCA Guidelines	
Model Practices	Those practices most consistent with the Level Cost Allocation Model (LCAM).
Acceptable Practices	Generally those which, while not consistent with the LCAM, are well established in practice and typically do not require additional analysis.
Acceptable Practices with Conditions	May be acceptable in some circumstances either to reflect different policy objectives or on the basis of additional analysis.
Non-Recommended Practices	Systems using these practices should acknowledge the policy concerns identified in the CCA Guidelines or acknowledge they reflect different policy objectives.
Unacceptable Practices	No description provided by CCA, but implication is that these should not be used.

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Section 4 Actuarial Liabilities

Audit Conclusion



We independently calculated the present value of future benefits and future salaries and the entry age normal costs for the Washington State Public Retirement Systems. We found that all significant benefit provisions were accounted for in an accurate manner and the actuarial assumptions and methods are being applied correctly. Our total liabilities closely matched those calculated by OSA. This was true both in aggregate and by System.

Note that there will always be differences in the calculated liabilities when different software is used by different actuaries; however, the results should not deviate significantly. The level of consistency we found in this audit provides a high level of assurance that the results of the valuation accurately reflect the liabilities of the Washington State Public Retirement Systems based on the plan provisions, assumptions, methods, and census and financial data.

We have a few recommendations to be considered for future valuations at the end of this section.

Comments

We incorporated the following information into our valuation system:

- **Data** – We used the data provided by DRS. As discussed in Section 2, we confirmed that this data was consistent with the valuation data used by OSA.
- **Assumptions and Methods** – We used the assumptions and methods recommended by OSA for the June 30, 2013 actuarial valuation. This was supplemented by discussions between OSA and Milliman on the technical application of these methods.
- **Benefit Provisions** – We obtained this information from the Revised Code of Washington and various member handbooks.

**Comments
(continued)**

We then performed an independent parallel valuation as of June 30, 2013. Based on this valuation, we completed a detailed comparison of the Present Value of Future Benefits (PVFB) computed in our independent valuation and the amounts calculated by OSA. Exhibit 4-1 shows a summary of this analysis broken down by benefit type. Exhibit 4-2 shows a summary of this analysis broken down by System. The results were reasonable, and our calculated PVFB values match closely with those calculated by OSA.

**Exhibit 4-1
Present Value of Future Benefits by Benefit Type**

(in \$Millions)	All Systems in Aggregate		
	OSA	Milliman	O / M Ratio
Present Value All Future Benefits			
Retirement	\$46,939.4	\$46,649.7	100.6%
Termination	1,865.5	1,889.7	98.7%
Death	896.8	908.7	98.7%
Disability	<u>517.2</u>	<u>514.4</u>	<u>100.5%</u>
Total Actives	\$50,218.9	\$49,962.5	100.5%
Terminated Vested	\$3,614.0	\$3,596.5	100.5%
Terminated Not Vested	<u>269.7</u>	<u>269.8</u>	<u>100.0%</u>
Total Inactive, not in Payment	\$3,883.7	\$3,866.4	100.4%
Retired	\$30,456.6	\$30,515.3	99.8%
Disabled	2,310.2	2,316.0	99.7%
Survivor	1,946.0	1,954.4	99.6%
LOP Liability	<u>72.8</u>	<u>72.9</u>	<u>99.9%</u>
Total Annuitants	\$34,785.6	\$34,858.6	99.8%
Total Members	\$88,888.2	\$88,687.5	100.2%

Comments
(continued)

Exhibit 4-2
Present Value of Future Benefits by System

	OSA	Milliman	Ratio OSA/Milliman
Present Value All Future Benefits (in \$Millions)			
PERS 1			
Active Members	\$ 1,641.1	\$ 1,608.5	102.0%
Inactive Members	<u>11,371.1</u>	<u>11,348.7</u>	<u>100.2%</u>
Total	\$ 13,012.2	\$ 12,957.2	100.4%
PERS 2/3			
Active Members	\$ 25,015.1	\$ 24,787.6	100.9%
Inactive Members	<u>8,388.8</u>	<u>8,405.1</u>	<u>99.8%</u>
Total	\$ 33,403.9	\$ 33,192.7	100.6%
TRS 1			
Active Members	\$ 979.4	\$ 992.8	98.6%
Inactive Members	<u>8,511.5</u>	<u>8,539.5</u>	<u>99.7%</u>
Total	\$ 9,490.9	\$ 9,532.3	99.6%
TRS 2/3			
Active Members	\$ 9,689.2	\$ 9,707.6	99.8%
Inactive Members	<u>2,335.9</u>	<u>2,355.5</u>	<u>99.2%</u>
Total	\$ 12,025.1	\$ 12,063.1	99.7%

Comments
(continued)

Exhibit 4-2 (continued)
Present Value of Future Benefits by System

	OSA	Milliman	Ratio OSA/Milliman
Present Value All Future Benefits (in \$Millions)			
SERS 2/3			
Active Members	\$ 3,227.8	\$ 3,223.1	100.1%
Inactive Members	<u>1,267.1</u>	<u>1,272.4</u>	<u>99.6%</u>
Total	\$ 4,494.9	\$ 4,495.5	100.0%
PSERS 2			
Active Members	\$ 580.6	\$ 576.1	100.8%
Inactive Members	<u>14.7</u>	<u>14.7</u>	<u>100.1%</u>
Total	\$ 595.3	\$ 590.8	100.8%
LEOFF 1			
Active Members	\$ 165.8	\$ 163.7	101.3%
Inactive Members	<u>4,254.5</u>	<u>4,266.7</u>	<u>99.7%</u>
Total	\$ 4,420.3	\$ 4,430.4	99.8%
LEOFF 2			
Active Members	\$ 8,451.4	\$ 8,434.9	100.2%
Inactive Members	<u>1,862.4</u>	<u>1,860.8</u>	<u>100.1%</u>
Total	\$ 10,313.8	\$ 10,295.7	100.2%
WSPRS			
Active Members	\$ 468.4	\$ 468.2	100.0%
Inactive Members	<u>663.3</u>	<u>661.5</u>	<u>100.3%</u>
Total	\$ 1,131.8	\$ 1,129.8	100.2%

**Comments
(continued)**

We also looked at the Projected Unit Credit Accrued Liability (PUC AL). PUC AL is used by OSA to measure the funded ratios and is described in Section 5. Exhibit 4.3 shows the audit had a good match of PUC AL. The June 30, 2013 actuarial valuation is the last valuation in which OSA plans to use PUC AL to measure the funded ratio. Next year OSA plans to use Entry Age Accrued Liability consistent with the revised accounting standards GASB No. 67 and GASB No. 68.

**Exhibit 4-3
Comparison of Projected Unit Credit Accrued Liability**

	OSA	Milliman	Ratio OSA/Milliman
Projected Unit Credit Accrued Liability (PUC AL) (in \$Millions)			
PERS 1	\$ 12,884.3	\$ 12,614.8	102.1%
PERS 2/3	23,797.8	23,733.7	100.3%
TRS 1	9,448.7	9,431.7	100.2%
TRS 2/3	8,016.4	7,942.1	100.9%
SERS 2/3	3,272.7	3,272.5	100.0%
PSERS 2	180.3	182.1	99.0%
LEOFF 1	4,409.5	4,384.1	100.6%
LEOFF 2	6,859.3	6,841.6	100.3%
WSPRS	959.0	954.2	100.5%
Total PUC AL	\$ 69,828.1	\$ 69,356.8	100.7%

Lastly, we looked at both the present value of future salaries and the entry age normal cost (EANC) rates, which are used in the determination of the minimum contribution rates.

**Exhibit 4-4
Present Value of Future Salaries and EANC Rate**

(in \$Millions)	All Systems in Aggregate		
	OSA	Milliman	O / M Ratio
Present Value of Future Salaries	\$148,623.8	\$146,966.0	101.1%
Entry Age Normal Cost Rate	10.18%	10.20%	99.8%

Recommendations

We have two recommendations for the next actuarial valuation.

Calculation of Entry Age. For the next valuation, we recommend Entry Age be calculated using service rounded to the nearest year. This will only impact calculations of the EANC rate. The EANC rate is used in two places: (1) the LEOFF 2 contribution rate is currently based on 100% of EANC, and (2) the minimum contribution rates for the other system are set equal to 80% or 70% of the EANC rate. Since the minimum contribution rates do not apply in the June 30, 2013 actuarial valuation, this method change would have no impact for non-LEOFF 2 plans.

The method change would be expected to decrease the LEOFF 2 EANC by 2% to 3% of the total (e.g., if the EANC rate was 10.00%, it would expect to decrease by 0.20% to 0.30%). Therefore, we do not see this as cause for concern, since the impact of this method change on the EANC rate would be small and the current method is conservative.

Currently Entry Age is being calculated as current age minus truncated (rounded down) service. We recommend this calculation be changed so that Entry Age is calculated as current age minus service rounded to the nearest year. This will result in lower entry ages for some members.

Weighting of EANC. We believe the EANC rate for Plans 2 and 3 should be based on the current membership instead of an assumption of 67% for Plan 2 and 33% for Plan 3. This will have no impact on any contribution rate calculation in the June 30, 2013 actuarial valuation, but may have a small impact on future valuations. This only applies to Systems with both Plans 2 and 3 and only impacts the minimum contribution rate based on EANC. Therefore it will only impact the minimum contribution rates for PERS 2/3, TRS 2/3 and SERS 2/3, none of which apply in the June 30, 2013 valuation.

RCW 41.45.155 and RCW 41.45.158 state separately for each System that: "The minimum contribution rate for the plans 2 and 3 employer (or employee) normal cost shall equal the total contribution rate required to fund eighty percent of the plans 2 and 3 employer (or employee) normal cost as calculated under the entry age normal cost method." The RCW does not state how the normal cost should be weighted between Plans 2 and 3. Currently OSA's calculations weight the normal cost by 67% for Plan 2 EANC and 33% for Plan 3 EANC for all Systems. However, the percent of combined Plan 2/3 salary currently coming from Plan 2 is about 81% for PERS 2, 17% for TRS 2 and 41% for SERS 2. The 67% assumption is intended to reflect new entrants.

Recommendations (continued)

Based on current membership, this assumption should at least be reviewed. In addition, we believe it makes the most sense to base the calculation on the current membership since it is the best representation of current year costs. The RCW does not state the calculation should be based on new entrants and if it did, the current membership would be a reasonable proxy for new entrants and would not rely on periodic reevaluation.

Non-Duty Disability Benefit in Year Before Retirement

Eligibility for LEOFF 2. Future disabilities are assumed to occur in the middle of the year. The valuation system used by OSA takes the average of the benefit at the beginning of the year and the end of the year to determine the benefit amount at the middle of the year. In one case, non-duty disability for LEOFF 2, the projected non-duty disability benefits for age 50 and above are \$0 for a member eligible for service retirement in the future. Since OSA assumes no non-duty disability occurs after retirement eligibility, this is not an issue, except at age 49.5 where the non-duty disability benefit is the average of the projected age 49 non-duty disability benefit and the age 50 benefit, which is \$0. This results in an understatement for this benefit at age 49.5. Once again, the potential financial impact of this is extremely small, but we recommend an adjustment be made for this in future valuations.

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Pension Funding Council and LEOFF 2 Board Actuarial Audit of 2013 Actuarial Valuation and 2007-2012 Demographic Experience Study

Section 5 Funding

Audit Conclusion



Comments

We reviewed the funding methods and their application. We find them reasonable and consistent with the Actuarial Standards of Practice and the objectives stated in RCW 41.45.010. Based on the Systems' funding methods and assumptions, we believe the employer contribution rates for each membership class are appropriately calculated.

When we used the liabilities, present value of future salaries, and actuarial assets calculated by OSA, we matched OSA's contribution rate calculations exactly. When we used the liabilities, present value of future salaries, and actuarial assets calculated by Milliman, the results were close to OSA's calculated contribution rates as shown below.

	OSA	Milliman	Difference OSA - Milliman
Employer Contribution Rates (Percent of Member Pay)			
PERS 1	5.18%	5.12%	0.06%
PERS 2/3	7.11%	7.04%	0.07%
TRS 1	6.91%	7.02%	-0.11%
TRS 2/3	7.56%	7.70%	-0.14%
SERS 2/3	7.70%	7.69%	0.01%
PSERS 2	6.89%	6.88%	0.01%
WSPRS	8.79%	8.43%	0.36%
LEOFF 2*	5.31%	5.31%	0.00%

** Based on a potential LEOFF 2 contribution rate structure of 100% of EANC and the employers' 30% share.*

Comments (continued)

The largest difference in contribution rates was WSPRS at 0.36% of pay. This is not an unreasonable result for an audit. However, as shown below, this provides an example of how very small and reasonable differences in liability calculations can lead to larger differences in contribution calculations if all the technical differences happen to push the contribution rate in the same direction. In this case, several different factors all caused the rate calculated by Milliman to be smaller. There was a 0.2% difference in the Present Value of Future Benefits, a 0.1% difference in Actuarial Value of Assets and a 0.7% difference in the Present Value of Future Salaries. Although the differences were all very reasonable, they all contributed to make an Employer Normal Cost that was 0.22% of pay larger for OSA. In addition, the 7.19% maximum member contribution rate had an effect [RCW 41.45.0631]. Since OSA's employer normal cost of 7.33% exceeded this by 0.14%, those 0.14% of contributions are shifted to the employer, whereas under Milliman's calculations, there was no shift. The combined result was a calculated difference of 0.36% of pay.

	OSA	Milliman	Comparison OSA to Milliman
WSPRS Contribution Rate Calculation (in \$Millions)			<u>Ratios</u>
a. Present Value All Future Benefits	1,131.8	1,129.8	100.2%
b. Actuarial Value of Assets	-1,009.4	-1,010.1	99.9%
c. Balance for Improved Survivor Benefits	-9.8	-9.8	100.0%
d. Present Value Future Contributions	112.6	109.9	102.5%
e. Present Value of Future Salaries	767.8	773.1	99.3%
			<u>Differences</u>
f. Member Normal Cost = 50% of d / e	7.33%	7.11%	0.22%
g. Member Rate (7.19% Maximum) (Maximum described in RCW 41.45.0631)	7.19%	7.11%	0.08%
h. Employer Normal Cost = 50% of d / e	7.33%	7.11%	0.22%
i. Increase due to 7.19% Member Max.	0.14%	0.00%	0.14%
j. Rate to Amortize Survivor Benefits	1.32%	1.32%	0.00%
k. Employer Contribution Rate	8.79%	8.43%	0.36%

The remainder of this section describes in detail why we believe the funding policies used to calculate contribution rates are reasonable and consistent with the objectives described in the RCW.

Policy Objectives

The contribution rate calculations for the Washington State retirement systems are complex. Much of this complexity is due to efforts to conform with articulated policy objectives. RCW 41.45.010 states that it is the intent of the legislature to provide a dependable and systematic process for funding the benefits provided to members and retirees of the State's retirement systems and sets out five specific goals:

1. To fully fund the Plans 2 and 3 as provided by law;
2. To fully amortize LEOFF Plan 1 costs not later than June 30, 2024;
3. To fully amortize the unfunded actuarial accrued liability for PERS and TRS Plans 1 within a rolling 10-year period, using methods and assumptions that balance needs for increased benefit security, decreased contribution rate volatility, and affordability of pension contribution rates;
4. To establish long-term employer contribution rates which will remain a relatively predictable proportion of the future state budgets; and
5. To fund, to the extent feasible, all benefits for plan 2 and 3 members over the working lives of those members so that the cost of those benefits are paid by the taxpayers who receive the benefit of those members' service.

Although not specifically stated in RCW 41.45.010, the funding policies also achieve the following goals:

1. The same employer contribution rate is maintained for all members in the same class regardless of Plan. For example: employers make the same contribution for all TRS members regardless of whether they are in Plan 1, 2 or 3.
2. Funding risk is shared by both employers and members. In Plan 2, both employer and member contribution rates vary based on plan experience. In Plan 3, members take the risk associated with their contributions since they are deposited in the defined contribution plan.

Actuarial Cost Methods

The funding policies of the Washington State Retirement Systems are based on two actuarial cost methods: the Aggregate cost method and the Entry Age cost method. The Funded Ratios are measured based on a third cost method, the Projected Unit Credit cost method. The following text describes these methods.

Purpose of a Cost Method and Normal Cost

The purpose of any actuarial cost method is to allocate the cost of future benefits to specific time periods, typically during a member's projected working career. This is clearly stated in *Pension Mathematics for Actuaries*, A.W. Anderson, second edition, 1990, p. 5.

"The painful lesson which has been learned over and over again in the last century by various types of employers – first private employers, and later public employers – is that the cost of a pension plan must be recognized during the *working lifetimes* of the employees who are ultimately going to receive pensions, preferably by actually funding amounts sufficient to provide completely for each employee's life annuity at the time of retirement." The text goes on to state on p. 6: "This is where actuaries come into the picture, ... The actuary can ... assign to each fiscal year a portion of the present value of future benefit payments in such a way as generally to accrue costs over the working lifetimes of employees. Any scheme for making such an assignment of costs is called an *actuarial cost method* – which we shall henceforth refer to simply as a "cost method."

The cost assigned to a specific year is called the Normal Cost.

Aggregate Cost Method

Under the Aggregate cost method, the Normal Cost rate is equal to the level percentage of pay necessary to fund the difference between the present value of all future benefits for current members (PVFB) and the actuarial value of assets (AVA). The difference between PVFB and AVA is funded by future contributions. Each year, the Normal Cost spreads all required future contributions evenly over the present value of future salaries for current members. When actual experience is better or worse than expected experience, the Normal Cost in subsequent years will go down or up, respectively. The contribution calculated by the Aggregate cost method is therefore equal to the Aggregate Normal Cost.

Note that this method does not result in a calculation of the liability independent of assets and therefore does not provide a meaningful "Funded Ratio." OSA currently addresses this by use of the Projected Unit Credit (PUC) actuarial cost method. PUC is used to calculate the Funded Ratio and is used for GASB accounting and financial reporting. It is not used for the contribution rate calculations.

Plans 2 and 3 employer and member contribution rates are primarily set using the Aggregate cost method.

Entry Age Actuarial Cost Method

The Entry Age cost method is the most common method used by public plans. The goal of the Entry Age method is the theoretical allocation of projected benefit costs as a level percent of pay over the members' entire working lifetimes. The Entry Age Normal Cost (EANC) is the theoretical level percent of pay which, if contributed from the members' dates of hire to their dates of projected retirement, would exactly fund their benefits if all experience exactly matched the actuarial assumptions. Actual experience better or worse than expected will not change the EANC. The EANC is not anticipated to increase or decrease from year to year. Experience better or worse than expected creates a positive or negative Unfunded Actuarial Accrued Liability (UAAL), which is funded separately from the EANC. Therefore, Systems using the Entry Age cost method have two components to their calculated costs: (1) the EANC, which is meant to be a level % of pay, and (2) the UAAL amortization contribution, which is the balancing item that makes sure all future benefits are financed if future experience follows the assumptions, and contributions are made according to schedule.

For the purposes of the Washington State plans, the Entry Age method is only used to set minimum contribution rates based on the EANC. This is a logical use of EANC and should increase contribution stability since it represents the theoretical level percentage of pay contribution required to fund benefits if future experience follows the actuarial assumptions. Specifically, RCW sets minimum contribution rates as follows:

- PERS, TRS, SERS and PSERS Plan 2/3 employers and Plan 2 members have a minimum contribution rate based on sharing 80% of EANC except for PSERS members. [RCW 41.45.155 and RCW 41.45.158]
- WSPRS employers and members have a minimum contribution rate based on sharing 70% of EANC [RCW 41.45.0631].
- The LEOFF Plan 2 Board has established a policy that considers contribution rates equal to both 90% and 100% of the EANC and has recently established contribution rates based on 100% of the EANC.

Projected Unit Credit (PUC) Cost Method

Under the Projected Unit Credit (PUC) cost method, the projected retirement benefit is calculated including both projected salary increases and service, similar to the PVFB under the Aggregate method. The accrued liability is then allocated based on the ratio of the current service as of the valuation date to all projected service. The PUC Normal Cost is equal to the present value of benefits allocated to the current year.

The Entry Age method is the most commonly used method by public plans because it produces normal costs which are expected to be a level percent of pay from year to year for a specific employee. In contrast, the PUC method, which is the mandated method for financial reporting for US private plans, produces normal costs which are expected to increase from year to year for a specific employee. This generally results in smaller accrued liabilities under the PUC than are calculated under the Entry Age method.

OSA is currently using the PUC method to calculate funded ratios, but is planning to start using the Entry Age method next year consistent with the change in the new Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

Plans 2 and 3 Funding Policy

In general, the Plans 2 and 3 funding policies for PERS, TRS, SERS, PSERS and WSPRS are based on the Aggregate Cost method and work as described below. Note that where the following text makes references to “Plans 2 and 3” the references should be substituted with “Plans 1 and 2” for WSPRS. Also, please note that PSERS has no Plan 3. RCW 41.45 describes the actuarial funding of state retirement systems. The primary references for Plans 1, 2 and 3 funding are [RCW 41.45.060 Basic State and Employer Contribution Rates], [RCW 41.45.061 Required Contribution Rates for Plan 2 Members] and [RCW 41.45.0631 Washington State Patrol Retirement System].

1. First, the remaining Plans 2 and 3 “past liability balances,” which are financed entirely by employer contributions, are determined. Currently for PERS, TRS and SERS, these are due to gain sharing, and for WSPRS these are due to distributions under RCW 43.43.270(2) for survivors of members who became disabled under RCW 43.43.040(2) prior to July 1, 2006. The remaining past liability balances are determined by taking the prior year’s balance, adding interest, and subtracting employer contributions based on the corresponding supplemental employer percent of pay contribution rates: PERS 0.11%, TRS 0.77%, SERS 1.00% and WSPRS 1.32%.

Plans 2 and 3 Funding Policy (continued)

2. The Plans 2 and 3 Present Value of Future Contributions shared by employers and members is calculated as:

$$\begin{array}{r} \text{Present Value All Future Benefits} \\ \text{minus} \quad \text{Actuarial Value of Assets} \\ \text{minus} \quad \text{Past Liability Balance} \\ \hline \text{Present Value of Future Contributions} \end{array}$$

3. The Plans 2 and 3 Aggregate Normal Cost Rate is determined by spreading the present value of future contributions shared by employers and members over the present value of future Plans 2 and 3 member salaries. The calculation takes into account that Plan 3 members do not contribute to the defined benefit plans.
4. Plans 2 and 3 minimum employer and member contribution rates are applied based on the EANC. The minimum rate for PERS, TRS, SERS and PSERS is 80% of EANC except for PSERS members who do not have a minimum. The minimum rate for WSPRS is 70% of EANC. LEOFF 2 contributions are currently based on 100% of the EANC, which works like a minimum since it is currently larger than the Aggregate Normal Cost Rate.
5. Plans 2 maximum member contribution rates are applied to TRS [RCW 41.45.061] and WSPRS [RCW 41.45.0631]. This results in the Plan 2 member contribution rates.
6. The Plans 2 and 3 employer rates are increased by the supplemental contributions rates used to finance past liability balances. As described above these are: PERS 0.11%, TRS 0.77%, SERS 1.00% and WSPRS 1.32%.
7. Plans 2 and 3 employer rates are also increased to account for any maximums applied to member contribution rates resulting in the final Plans 2 and 3 employer contribution rates.

LEOFF 2 Funding Policy

The LEOFF 2 funding policy follows the same general pattern as the other Plans 2 and 3 with fewer details. As stated above, LEOFF 2 contributions are currently based on 100% of the EANC, which works like a minimum since it is currently larger than the Aggregate Normal Cost Rate. The total contribution is paid 50% by employees, 30% by employers, and 20% by the State [RCW 41.26.725]. In addition, RCW 41.26.720 states that the actuary shall “utilize the aggregate actuarial cost method, or other recognized actuarial cost method based on a level percentage of payroll.” Since (a) 100% of EANC is the theoretical contribution that will finance benefits if paid as a level percent of pay over the members’ full working careers, and (b) 100% of EANC is larger than the Aggregate Normal Cost, the method currently employed is consistent with the RCW.

**LEOFF 2 Funding
Policy
(continued)**

The current LEOFF 2 funding policy might be interpreted as: paying the greater of 100% of EANC or the Aggregate Normal Cost. This works well to establish a stable contribution rate (100% EANC) while ensuring liabilities are financed over a responsible period (Aggregate Normal Cost). However, the current funding policy does not address how stable contribution rates will be maintained if the Plan's funding ratio continues to increase. Specifically, the Board may wish to proactively consider: (a) If the funding ratio continues to increase, at what point should action be taken. (b) What would that action be. For instance, two potential actions consistent with stable contribution rates would be to de-risk retiree liability, or to adopt more conservative assumptions.

**Plans 1 Funding
Policy (PERS, TRS,
SERS and PSERS)**

PERS and TRS Plans 1 are both closed to new members. The PERS and TRS Plans 1 funding policies have been designed to produce equal total contribution rates for PERS and TRS employers regardless of whether their employees are in Plans 1, 2 or 3, and to share the responsibility of PERS Plan 1 benefits with SERS and PSERS employers. It works as follows.

1. All PERS and TRS Plan 1 members have fixed contribution rates equal to 6.00% of pay.
2. The remaining balances for any liability from Plan 1 benefit improvements effective after June 30, 2009 are determined. These liabilities are financed based on rates that were calculated to amortize them over a fixed 10-year period using combined Plans 1, 2 and 3 salaries. The remaining balances are determined by taking the prior year's balance, adding interest, and subtracting employer contributions based on the corresponding employer percent of pay contribution rates: PERS 0.14% and TRS 0.15%.
3. The Present Value of Future Normal Costs (PVFNC) is determined. The Plan 1 funding policy defines this to be the present value of future contributions made by Plan 1 employees plus the present value of future employer contributions made as a percent of Plan 1 member pay based on the Plans 2 and 3 employer contribution rates calculated above. This must be taken into account to keep the contribution rates equal for Plans 1, 2 and 3.
4. The Plan 1 UAAL is calculated as:

	Present Value All Future Benefits
minus	PVFNC
minus	Actuarial Value of Assets
minus	Balance Post 2009 Improvements
	<hr/>
	Unfunded Actuarial Accrued Liability

**Plans 1 Funding
Policy (PERS, TRS,
SERS and PSERS)
(continued)**

5. The Unfunded Actuarial Accrued Liability Rate (UAAL Rate) is calculated as the percent of Plans 1, 2, and 3 member pay to amortize the Plan 1 UAAL over 10 years as a level percentage of projected payroll. This is based on a rolling 10-year period which means every year the UAAL is amortized over a new 10-year period. This helps to keep rates stable while amortizing a material portion of the remaining UAAL each year.
6. Minimum contribution rates of 3.50% of pay for PERS 1 UAAL and 5.75% of pay for TRS 1 UAAL are applied. When combined with the rolling 10-year period, these will help to get the UAAL for the Plans 1 completely financed over a reasonable period instead of indefinitely re-amortizing it over 10 years.

**Conference of
Consulting Actuaries
Draft White Paper**

The Conference of Consulting Actuaries has issued a draft white paper titled *Actuarial Funding Policies and Practices for Public Pension Plans*. The white paper was composed by a group of public plan actuaries from the major consulting firms that work with public plans and was the result of an extensive series of meetings which lasted for over two years. The white paper focuses on a Level Cost Allocation Model (LCAM) and provides detailed analysis for classifying each of the three major components of LCAM funding policies: (a) cost methods, (b) asset methods and (c) amortization methods. The classification system uses the following terms:

Categories Under CCA Guidelines	
Model Practices	Those practices most consistent with the Level Cost Allocation Model (LCAM).
Acceptable Practices	Generally those which, while not consistent with the LCAM, are well established in practice and typically do not require additional analysis.
Acceptable Practices with Conditions	May be acceptable in some circumstances either to reflect different policy objectives or on the basis of additional analysis.
Non-Recommended Practices	Systems using these practices should acknowledge the policy concerns identified in the CCA Guidelines or acknowledge they reflect different policy objectives.
Unacceptable Practices	No description provided by CCA, but implication is that these should not be used.

We will make reference to the draft Conference of Consulting Actuaries white paper in our discussion below.

Evaluation of Funding Policy

As stated earlier, we believe the funding policies are consistent with Actuarial Standards of Practice and with the intended policy objectives. Additional specific comments follow below.

The Aggregate cost method is used as the foundation for the funding policies. The Aggregate cost method is classified as “Acceptable” by the Conference of Consulting Actuaries (CCA) Draft White Paper, is well established in practice, and is consistent with the objectives in that document.

The Aggregate cost method is specifically designed to fully fund all future benefits for current members (that are not financed by accumulated assets) over the remaining projected working lifetimes of those members. This represents excellent “demographic matching,” which is to say benefits are funded over the working lifetimes of the members receiving them. It is also excellent at avoiding “agency risk” issues, which means use of the Aggregate method makes it very difficult to push the cost of benefits for current members onto future generations.

The Aggregate method is also consistent with the policy objectives identified in RCW 41.45.010, which is particularly evidenced by how well the fifth policy objective is satisfied: to fund, to the extent feasible, all benefits for Plan 2 and 3 members over the working lives of those members so that the cost of those benefits are paid by the taxpayers who receive the benefit of those members' service.

The Aggregate method's primary shortcoming is that it passes all gains and losses through to the Normal Cost, which pays for them over the comparatively short, although very responsible, period of the active members' projected remaining working lifetimes. The downside of this is that it can decrease the stability of short-term costs. This shortcoming is addressed in the funding policy by smoothing asset gains and losses over as much as eight years, as well as by applying the minimum contribution rates. Eight-year asset smoothing is longer than five years, which is the most common length of asset smoothing. The comparatively longer asset smoothing period helps partially offset the comparatively shorter financing period for gains and losses under the Aggregate cost method. The minimum contribution rates equal to 70% or 80% of the EANC help avoid temporary large decreases in contributions due to good investment experience at the peak of a market cycle.

Evaluation of Funding Policy (continued)

The Plans 1 policy of contributing at a level which finances the Unfunded Actuarial Accrued Liability (UAAL) over a rolling 10-year period based on the pay of Plans 1, 2 and 3 is a rough equivalent of the Aggregate Cost Method. The 10-year rolling period bears a very general similarity to financing UAAL over the members' projected remaining working lifetimes. When the minimum contribution rates of 3.50% for PERS 1 and 5.75% for TRS are added, the policy also has an element that will help to get the UAAL for the Plans 1 completely financed over a reasonable period instead of indefinitely re-amortizing it over a rolling 10-year period. The funding policy is very consistent with the third policy objective listed in RCW 41.45.010, which is to fully amortize the UAAL for PERS and TRS Plans 1 within a rolling 10-year period, using methods and assumptions that balance needs for increased benefit security, decreased contribution rate volatility, and affordability of pension contribution rates.

As stated above the 100% of EANC currently contributed for LEOFF 2, which is larger than the Aggregate Normal Cost, is consistent with the RCW and shares the advantages discussed for the other Plans 2 and 3. Paying 100% of EANC also avoids making contributions which are less than the expected long-term cost of benefits. Short-term rate stability is increased since rates will not fluctuate every year due to gains and losses, particularly investment gains and losses, being reflected in the Aggregate Normal Cost. Some margin is provided for adverse experience since the rates are higher than the Aggregate Normal Cost. A contribution policy of 100% EANC does require consistent monitoring. However, this monitoring occurs automatically under the policy as long as the contribution is not allowed to be less than the Aggregate Normal Cost.

Recommendation

We have one small recommended change to the methodology currently used in the funding policy calculations. The starting salary that the rolling 10-year amortization of the Plan 1 UAAL is based on has been projected from the prior year with both general wage increases and increases for promotion and seniority, sometimes referred to as merit and longevity. We believe it would be preferable to exclude salary increases for promotion and seniority since those individual member effects are not expected to increase the total plan payroll. We recommend this be reflected next year.

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Pension Funding Council and LEOFF 2 Board Actuarial Audit of 2013 Actuarial Valuation and 2007-2012 Demographic Experience Study

Section 6 Actuarial Assumptions (Economic)

Audit Conclusion



We reviewed the economic assumptions used in the valuation and found them to be reasonable. The economic assumptions used were adopted based on the OSA's 2013 Report on Financial Condition and Economic Experience Study completed in August 2013. While a full audit of that report is beyond the scope of our assignment, we feel an actuarial audit would be incomplete without a review of the important economic assumptions used in the actuarial valuation.

We have the following comments regarding the economic assumptions:

- Our analysis supports the expected rate of return of 7.50% recommended by the Office of the State Actuary. While the current assumption of 7.80% used for non-LEOFF 2 plans is also reasonable, we believe that 7.50% is a more realistic assumption and recommend that the investment return assumption continue to decrease. 7.50% (or lower) is consistent with the recommendations we are currently making to our retained clients.
- It should be noted that there are recent revisions to Actuarial Standard of Practice No. 27 (ASOP No. 27) that will be effective for the June 30, 2015 valuation and later. These revisions will impact how an actuary determines a reasonable assumption. In particular, the current standard allows for the selection of an assumption that falls within the best-estimate range, whereas the new standard narrows considers this to be reasonable only if it has no significant bias (i.e., it is neither significantly optimistic nor pessimistic). The standard does allow for a provision for adverse deviation. Ultimately, we believe that an assumption that was on the high end of the best-estimate range under the current standard may not be reasonable under the new standard. This could impact the selection of the economic assumptions and should be considered by the OSA at the time of the 2015 actuarial valuation.
- The inflation assumption of 3.00% is reasonable, as is the real wage growth assumption of 0.75% for productivity. The general salary increase assumption of 3.75% is the sum of these two assumptions.

Audit Conclusion (continued)

- As prescribed, OSA assumes annual growth in active membership varying by plan from 0.80% to 0.95%. Most public sector pension plans assume no future growth in system membership. A growth assumption greater than 0% is not allowed under current GASB standards for accounting and financial disclosure. While a zero growth assumption is not required for contribution rate calculation purposes, we believe that zero growth is the best assumption. Please note that this assumption only impacts the amortization of the Plan 1 UAAL over 10 years. The small membership growth assumption over the rolling 10-year amortization period has a modest impact on the calculated contribution rates.

Comments

The purpose of the actuarial valuation is to analyze the resources needed to meet the current and future obligations of the system. To provide a reasonable estimate of the long-term funded status of the system, the actuarial valuation must be predicated on methods and assumptions that will estimate the future obligations of the system in a reasonable manner.

An actuarial valuation uses various methods and two different types of assumptions: economic and demographic. Economic assumptions are related to the general economy and its long-term impact on the system, or to the operation of the system itself. Demographic assumptions are based on the emergence of the specific experience of the system's members.

Actuarial Standard of Practice No. 27: Selection of Economic Assumptions

The Actuarial Standards Board has adopted Actuarial Standard of Practice (ASOP) No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*. This standard provides guidance to actuaries giving advice on selecting economic assumptions for measuring obligations under defined benefit plans, such as the Washington State Public Retirement Systems.

As no one knows with precision what the future holds, the best an actuary can do is to use professional judgment to estimate possible future economic outcomes. These estimates are based on a mixture of past experience, future expectations, and professional judgment. The actuary should consider a number of factors, including the purpose and nature of the measurement, and appropriate recent and long-term historical economic data. Both the current and the new Standard explicitly advise the actuary not to give undue weight to recent experience.

**Actuarial Standard
of Practice No. 27:
Selection of
Economic
Assumptions
(continued)**

Recognizing that there is not one “right answer,” the current Standard calls for the actuary to develop a best-estimate range for each economic assumption, and then recommend a specific point within that range. Each economic assumption should individually satisfy the Standard.

After completing the selection process, the actuary should review the set of economic assumptions for consistency. For example, this suggests the actuary should use the same inflation component in each of the economic assumptions selected.

An actuary’s best-estimate range with respect to a particular measurement of pension obligations may change from time to time due to changing conditions or emerging plan experiences. Even if assumptions are not changed, we believe that the actuary should be satisfied that each of the economic assumptions selected for a particular measurement complies with Actuarial Standard of Practice No. 27, unless that assumption has been prescribed by someone with the authority to do so.

**Economic
Assumptions**

Based on the information and economic environment present as of the date of the OSA analysis, we believe the economic assumptions recommended by the OSA in the June 30, 2013 actuarial valuation are reasonable. In our opinion, the inflation, wage growth, and the investment return recommendations were reasonable and in line with what we have been recommending to our other clients. Note that non-LEOFF 2 systems are using an investment return assumption that is 0.30% higher than recommended by OSA, with the rate scheduled to decrease by 0.10% in the future. The current economic assumptions are as follows:

Assumption	Rate
Price Inflation	3.00%
Real Wage Growth or Productivity	<u>0.75%</u>
Total Wage Growth	3.75%
Total Investment Return	
OSA Recommendation	7.50%
Used by LEOFF 2	7.50%
Used by other systems	7.80%
Membership Growth	0.80% - 0.95%

Economic Assumptions (continued)

The liabilities and normal cost are directly impacted by these important assumptions. The most critical assumption in determining the present value of benefits is the total investment return assumption.

In our opinion, the current package of economic assumptions is reasonable. The following portion of this report discusses four of the key economic assumptions (inflation, wage growth, investment return, and membership growth).

Inflation

Use in the Valuation: Inflation, as referred to here, means price inflation. The inflation assumption has an indirect impact on the results of the actuarial valuation through the development of the assumptions for investment returns, general wage increases, payroll increase, and the cost-of-living adjustments for retirees and survivors.

Historical Perspective: The data for inflation shown below is based on the national Consumer Price Index, US City Average, All Urban Consumers (CPI-U) as published by the Bureau of Labor Statistics. These statistics are nationwide averages, and do not reflect the history of Washington state. However, we believe that future long-term inflation in this state will track that of the nation as a whole.

There are numerous ways to review historical data, with significantly differing results.

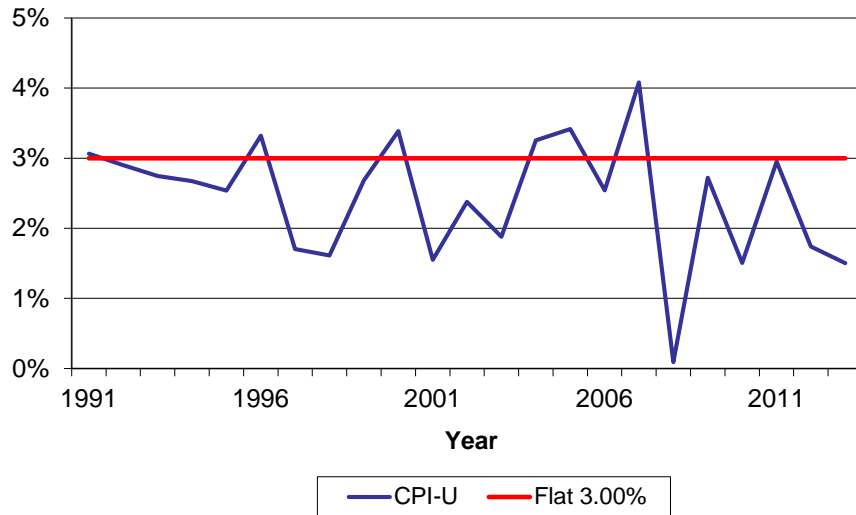
The table below shows the compounded annual inflation rate for the last five 10-year periods, and for the 75-year period ended in December 2012, the final calendar year prior to the selection of assumptions. For the 87 year period ended in December 2012 the average inflation is 3.0%, the same as the actuarial assumption. Eighty-seven years goes back to the first year provided in the Ibbotson Indices.

Decade	CPI Increase
2003-2012	2.4%
1993-2002	2.5%
1983-1992	3.8%
1973-1982	8.7%
1963-1972	3.4%
Prior 75 Years	
1938-2012	3.8%

Inflation (continued)

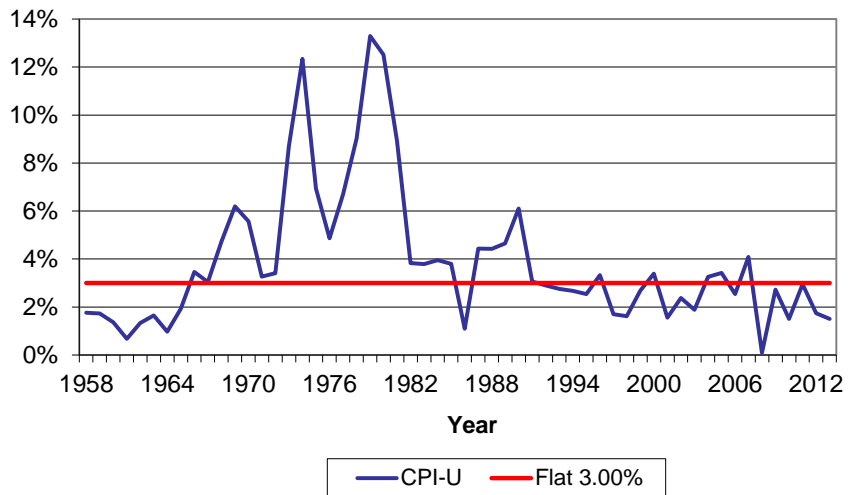
The following graphs show historical national CPI increases after 1990. Note that the actual CPI increases have been less than 3% for most of the past 22 years.

Historical CPI-U



Before that time, high inflation was more common and inflation exceeded the current assumption 41 times in the past century, sometimes by significant margins.

Historical CPI-U



Inflation (continued)

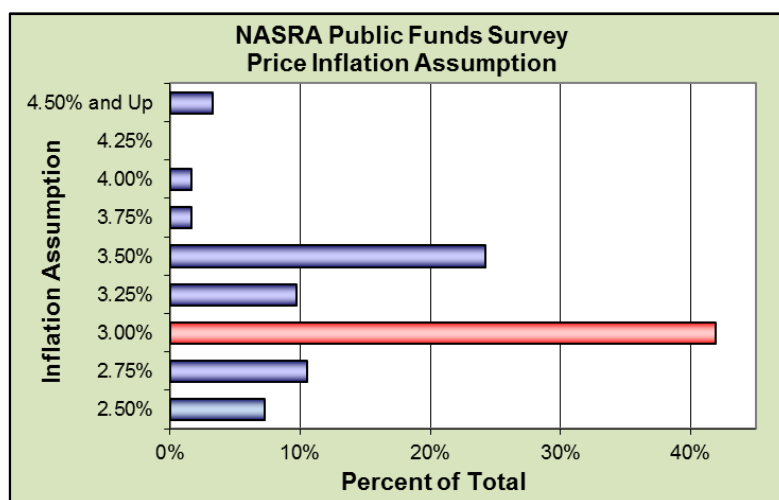
Forecasts of Inflation: Since the U.S. Treasury started issuing inflation-indexed bonds (TIPS), it is possible to determine the approximate rate of future inflation anticipated by the financial markets over a given period by comparing the yields on inflation indexed bonds with traditional fixed government bonds. As of August 2013, the time of the OSA's analysis, market prices suggested investors expected inflation to be about 2.20% over the next thirty years. As of July 2014, this measure has increased to about 2.35%.

Although most investment consultants and economists forecast lower inflation, they are generally looking at a shorter time horizon than is appropriate for a pension valuation. To consider a longer time frame, we looked at the expected increase in the CPI by the Office of the Chief Actuary for the Social Security Administration. In the 2013 Trustees Report, the projected average annual increase in the CPI over the next 75 years under the intermediate cost assumptions was 2.80%. The low-cost, high-cost range was stated as 1.80% to 3.80%.

In its 2013 Capital Markets White Paper, the Washington State Investment Board recommended an inflation assumption of 2.70%.

Peer System Comparison: Although assumptions should not be set based on what other systems are doing, it is informative to see how the Washington State Public Retirement Systems compare.

According to the 2013 *Public Fund Survey* (a survey of approximately 100 statewide systems), the average inflation assumption for statewide systems has been steadily declining. As of the most recent study, the average rate is 3.17%, the median was 3.00%, and 3.00% was the most common. The following chart shows the distribution.



Inflation (continued)

Reasonable (Best Estimate) Range: We believe that a range for inflation between 2.00% and 3.50% is reasonable for an actuarial valuation of a retirement system. The current assumption falls well within that range.

Consumer Price Inflation	
Current Assumption	3.00%
Best-Estimate Range	2.00% - 3.50%

Investment Return

Use in the Valuation: The investment return assumption is one of the primary determinants in the calculation of the expected cost of the benefits of the Washington State Public Retirement Systems, providing a discount of the estimated future benefit payments to reflect the time value of money. This assumption has a direct impact on the calculations of actuarial accrued liabilities, normal cost, and member and employer contribution rates.

The discount rate is the rate used to discount projected future benefit payments into a single actuarial net present value. The traditional actuarial approach used in the public sector sets the discount rate equal to the expected investment return. Under current standards set by the GASB, the terms “discount rate” and “investment return assumption” are used interchangeably and that rate “should be based on an estimated long-term investment yield on the investments that are expected to be used to finance the payment of benefits, with consideration given to the nature and mix of current and expected plan investments.”¹

It should be noted that GASB has recently revised the accounting and financial reporting for pension plans. While GASB has made many fundamental changes, the discount rate will still be based on the “long-term expected rate of return,” provided that the plan is not expected to be depleted of assets. Further, GASB’s provisions only apply to accounting and are not intended to impact a system’s funding.

The current net investment return assumption is 7.50% for LEOFF Plan 2 and 7.80% for the other systems, moving down to 7.70% in the future. The recommendation of the Office of the State Actuary was 7.50%.

¹ Governmental Accounting Standards Board (GASB) Statement No. 27, paragraph 10.c, and GASB Statement No. 45, paragraph 13.c.

Investment Return (continued)

Method to Determine Best-Estimate Range for Investment Return: The following chart sets out the target asset allocation as of June 30, 2013.

Asset Class	2013 Target Asset Allocation
Global Equity	37%
Private Equity	25%
Fixed Income	20%
Real Estate	13%
Tangible Assets	<u>5%</u>
Total	100%

We used a model to project future returns based on Milliman's capital market assumptions as of June 30, 2013, the target asset allocation, and assumed annual rebalancing. We divided the Global Equity category into component pieces of domestic equities, developed foreign equities, and emerging market equities based on their respective weights as of March 31, 2014 based per WSIB's latest available quarterly report. Based on Milliman's capital market assumptions, WSIB's allocation, and a 30-year time horizon we calculated 25th and 75th percentile returns of 5.9% and 9.3%, respectively, and a 50th percentile return of 7.57% net of investment expenses, which is close to the 7.50% OSA recommendation. All calculated averages are median geometric means averages, rather than arithmetic means.

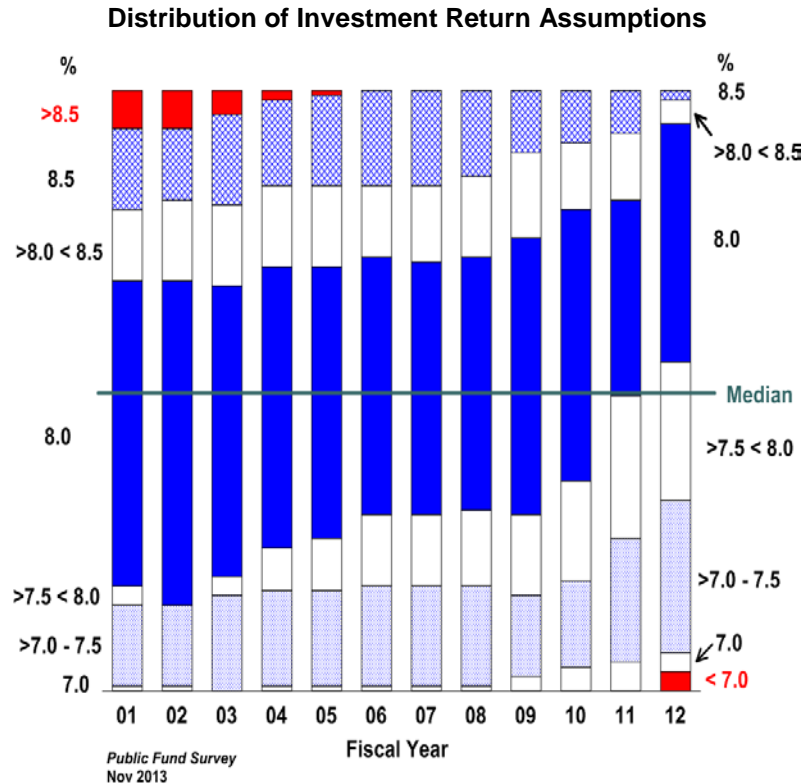
The 25th and 75th percentiles of 5.9% and 9.3% become our best-estimate range because 50% of the outcomes are expected to fall within this range and it is the narrowest symmetric range with 50% of the probable outcomes.

Therefore, we can say that based on our model the 30-year average annual investment return is just as likely to be within the range from 5.9% to 9.3% as not.

Note that different investment professionals have different capital market assumptions. The Office of the State Actuary used the capital market assumptions from the Washington State Investment Board's 2013 Capital Markets White Paper, in which the WSIB considered assumptions from numerous consultants and investment advisors. Based on this information, the OSA's simulated future investment returns over 50 years were 7.40%. This is generally consistent with the 7.57% median calculated using Milliman's capital market assumptions.

Peer System Comparison

According to the *Public Fund Survey*, the average investment return assumption for statewide systems has been slowly declining. As of the most recent study the median assumption is 7.75%. The following chart illustrates the decline in investment return assumptions since the inception of the *Survey* in FY 2001.



Gain-Sharing: In the past, members have received gain-sharing benefits. While the legislature recently repealed gain-sharing provisions, it is our understanding that there is current litigation that the Washington State Supreme Court will consider that could affect the changes made by the legislature.

If earnings are used for gain-sharing benefits rather than funding the base pension benefits when actual investment returns exceed the actuarial assumption, these earnings will not be available to make up the difference when earnings are less than assumed. Ultimately, this will result in a decrease in the actual investment returns available to pay the base benefits.

If there is a change in gain-sharing provisions, we recommend that the assumptions be reviewed and any revised provisions be reflected, either through a lower net investment return assumption or the calculation of an explicit additional liability for projected gain-sharing payments.

Conclusion: We find the OSA's recommendation for a 7.50% investment return assumption to be reasonable.

General Wage Growth

Use in the Valuation: Estimates of future salaries are based on two types of assumptions. Rates of increase in the general wage level of the membership are directly related to inflation, while individual salary increases due to promotion and longevity (also referred to as the merit scale) occur even in the absence of inflation. This section will address the general wage growth assumption (price inflation plus increases related to productivity and competitive wage pressures). The merit scale is discussed in the following section of this report (demographic assumptions).

The current wage growth assumption is 0.75% above the price inflation rate, or 3.75% per year. Note that the 3.75% includes increases in wages due to productivity and competitive wage pressures as discussed below.

Historical Perspective: We have used statistics from the Social Security Administration on the National Average Wage back to 1951. For years prior to 1951, we studied the Total Private Nonagricultural Wages as published in *Historical Statistics of the U.S., Colonial Times to 1970*.

There are numerous ways to review this data. For consistency with our observations of other indices, the table below shows the compounded annual rates of wage growth for various 10-year periods, and for the 75-year period ended in 2012.

Decade	Nominal Wage Growth	CPI Increase	Real Wage Growth
2003-2012	2.8%	2.4%	0.4%
1993-2002	3.8%	2.5%	1.3%
1983-1992	4.7%	3.8%	0.9%
1973-1982	7.4%	8.7%	-1.3%
1963-1972	5.2%	3.4%	1.8%
Prior 75 Years			
1938-2012	5.1%	3.8%	1.3%

The excess of wage growth over price inflation represents the increase in the standard of living, also called the real wage inflation rate.

Forecasts for Future Wage Growth: Real wage growth has been projected by the Office of the Chief Actuary of the Social Security Administration. In the 2013 Trustees Report, the long-term annual increase in the National Average Wage is estimated to be 1.1% higher than the Social Security intermediate inflation assumption of 2.8% per year. The range of the assumed real wage growth in the 2013 Trustees Report was from 0.5% to 1.7% per year.

**General Wage
Growth
(continued)**

Best-Estimate Range: We believe that a range between 0.00% and 1.25% is reasonable for the actuarial valuation. We believe that the current estimate of 0.75% is a reasonable estimate. Note that over the last 50 years, real wage inflation has averaged 0.60% per year.

Real Wage Inflation	
Current Assumption	0.75%
Reasonable Range	0.00% - 1.25%

**Growth in System
Membership**

The UAAL for Plan 1 is amortized over a rolling 10-year period as a level percentage of payroll in determining contribution rates as a percentage of pay. The current payroll increase assumption is equal to the general wage growth assumption of 3.75% and an allowance for future growth in system active membership.

It is our general recommendation to set the growth in system active membership assumption equal to zero. Most public sector pension plans assume no future growth in system active membership. This is required by current GASB standards for accounting and financial disclosure. While a zero growth assumption is not required for funding purposes, we believe that zero growth is the best assumption.

The analysis done by the OSA is based on population projections by the Office of Financial Management with a small upward adjustment based on historical increases in the retirement systems relative to the general population growth in the state of Washington. Long-term history in our state has shown system membership growth greater than that of the state's population, but we are not sure that this will continue into the future. Budgetary pressures and increased productivity may result in lower increases in the system membership and recent history has followed that pattern.

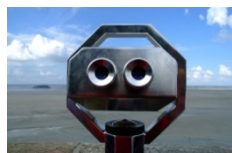
While the analysis by the OSA is reasonable, we feel that it is preferable not to anticipate future membership growth, as doing so pushes more costs to the future based on the assumption of increased payroll. Please note that this assumption only impacts the amortization of the Plan 1 UAAL. The small membership growth assumption over the rolling 10-year amortization period has a modest impact on the rates.

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Pension Funding Council and LEOFF 2 Board Actuarial Audit of 2013 Actuarial Valuation and 2007-2012 Demographic Experience Study

Section 7 Actuarial Assumptions (Demographic)

Audit Conclusion



We performed an audit of the calculations for the 2007-2012 Demographic Experience Study for the Washington State Public Retirement Systems. Based on this analysis, we reviewed the demographic assumptions used in the valuation and found them to be reasonable. We are making a few comments to consider for the next Experience Study.

Comments

Studies of demographic experience involve a detailed comparison of actual and expected experience. If the actual experience differs significantly from the overall expected results, or if the actual pattern does not follow the expected pattern, new assumptions are considered. Recommended revisions normally are not an exact representation of the experience during the observation period. Judgment is required to predict future experience from past trends and current evidence, including a determination of the amount of weight to assign to the most recent experience.

Actuarial Standard of Practice No. 35: Selection of Demographic Assumptions

Actuarial Standard of Practice No. 35 (ASOP 35) governs the selection of demographic and other noneconomic assumptions for measuring pension obligations. ASOP 35 states that the actuary should use professional judgment to estimate possible future outcomes based on past experience and future expectations, and select assumptions based upon application of that professional judgment. The actuary should select reasonable demographic assumptions in light of the particular characteristics of the defined benefit plan that is the subject of the measurement. A reasonable assumption is one that is expected to appropriately model the contingency being measured and is not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

Actual-to-Expected Ratio

In performing an Experience Study, an actuary will compare the actual results of the study with those the assumptions would have predicted. This comparison is called the “Actual-to-Expected” (A/E) ratio. If, for example, the A/E ratio for service retirement is 120%, this would indicate that the actual number of service retirements exceeded the number expected by the assumptions by 20%.

Mortality

One of the most significant of the demographic assumptions is mortality. The OSA studied the probability of death at each age for healthy (non-disabled) members, including active members, retirees, and survivors. The mortality for disabled members was studied separately.

The OSA recommended that the same mortality table be used for actives as for healthy retirees. While separate tables could be used, as actives do tend to have lower mortality than retirees, the active mortality assumption is not a particularly significant assumption and may not warrant a separate table.

The OSA's recommendations for this assumption can be split into two fundamental pieces. The first piece is the "base table," measuring the probability of people alive at the valuation date living another year. The other piece is the improvement scale. Because there is a pattern of increased longevity, the OSA is recommending that its calculations incorporate this pattern of improvement by using "generational" mortality. Someone who is 60 years old 25 years from now (35 years old today) can reasonably be expected to have a higher probability of living to age 61 than a current 60-year-old.

Previously, the OSA did not use a generational mortality table, but did estimate the impact of future improvement by using longer "static year" projections for the newer plans. The static year projections were chosen to provide results equivalent to the corresponding generational table.

Base Table Development

The approach used for developing the base table is to use RP-2000 Combined Healthy Mortality, project it to 2006, the middle of the period used to develop the base table assumptions, then make age adjustments to match the experience in the study period. For example, if an age adjustment of -1 is used, then someone who is 60 years old is assigned the probability of living to the next year that matches someone age 59 in the standard table. This is similar to the approach we typically use.

We believe that the recommended assumptions are reasonable; however, consideration should be given to changing certain aspects of the methodology for selecting the base tables at the time of the next experience study.

Mortality (continued)

Differences by Benefit Amount: Our analysis of public retirement systems has typically shown that retirees with above-average benefit amounts tend to live longer than those with below-average benefit amounts. This means that if the assumptions are accurately predicting the number of deaths, they may be overstating the release of liability expected when retirees die, which is what impacts the valuation.

We discussed this issue with the OSA and as a result, the OSA did an analysis on the PERS population by isolating the actual-to-expected deaths for those with annual retirement benefits less than \$20,000 versus those with benefits higher than \$20,000. Using the recommended tables for the 2001 – 2012 period, the OSA found that those with the lower benefits had an A/E ratio of 107%, while those with the higher benefits had a ratio of 87%. This confirms that those with higher benefits are living longer than the current assumption. It is our understanding that the OSA does intend to study benefit-weighted mortality at the time of its next experience study, and we endorse that methodology.

Death-Weighted Actual-to-Expected Calculations: In its analysis, the OSA calculated its A/E ratios by attaching more weight to ages with higher actual deaths. This resulted in higher calculated ratios than one would get by simply taking the total actual deaths and dividing by the number of deaths implied by the assumptions. Note that if the benefit-weighted mortality calculations are implemented, use of the death-weighted approach would be discontinued.

Inclusion of Active Members, Terminated Vested Members, and Survivors: In its analysis, the OSA combined active members, terminated vested members, and survivor beneficiaries along with the non-disabled retirees. On the whole, those groups had lower actual-to-expected ratios than the healthy retirees. It is not uncommon for active employees to experience lower mortality than retirees. This methodology resulted in lower ratios than there would have been if only healthy retirees had been studied, which partially offsets the impact of the death-weighting mentioned above. Once again, note that if benefit-weighted mortality calculations are implemented, concerns regarding including active members would be irrelevant as active members do not currently receive pension benefits.

Mortality (continued)

Mortality Improvement Scale

It is generally recognized that people are living longer. The OSA is recommending the use of 100% of Scale BB to project anticipated future improvements (decreases) in mortality. We believe this is a reasonable assumption.

100% of Scale BB will replace the current assumption which is 50% of Scale AA. The OSA is also recommending that the scale be applied generationally, using different assumptions for today's retirees than will be used for retirees in the future. Scale BB was originally released by the Society of Actuaries (SOA) in 2012. It is the most recent table of mortality improvement to be released by the SOA in more than draft form. The SOA's February 2014 report on mortality improvement states that Scale BB was developed using Social Security Administration data from 1950 to 2007, and was tested to be consistent with two large public plans. Information on CalPERS website shows that Scale BB projects less improvement than CalPERS experience from 1997 through 2011.

Milliman independently received year-by-year death rates from the Social Security Administration (SSA) for 1900 to 2009. The SSA confirmed that these death rates were calculated as follows: Data from the National Center for Health Statistics (NCHS) was used for ages below 65 in 1900-2009 and also for ages 65 and over in years prior to 1968. Final Medicare data on deaths and enrollments was used for ages 65 and over for years 1968 through 2009. This is also documented on pages 79-80 of the 2013 SSA Trustees report. We used this data along with Scales AA and BB to produce the two graphs included in this report. We limited the graphs in this report to ages 60 to 95 because those are the most important ages for mortality in terms of pension liability.

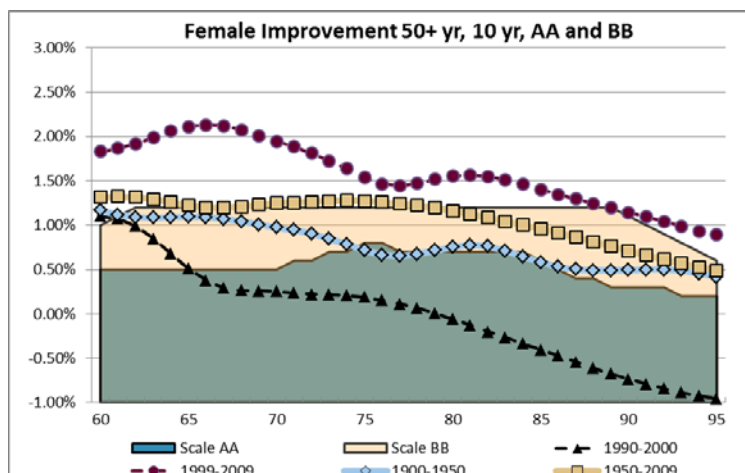
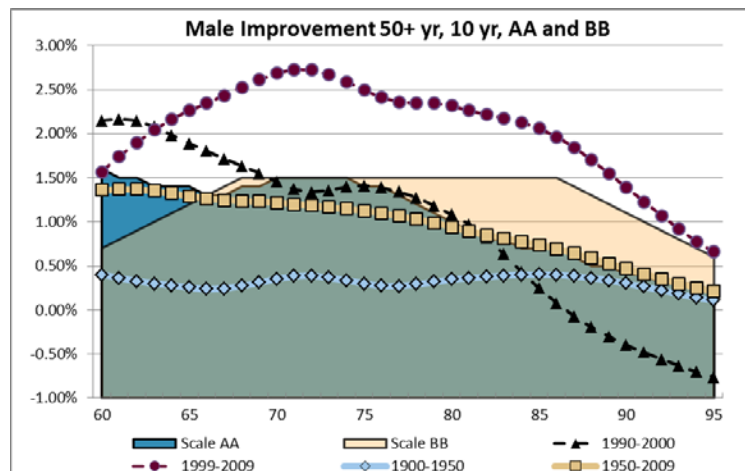
The graphs compare three pairs of series:

- 100% of Standard Projection Scales AA and BB
- Long-term averages of mortality improvement (50+ years) for 1900 to 1950 and 1950 to 2009.
- Recent 10-year averages of mortality improvement for 1990 to 2000 and 1999 to 2009.

Mortality (continued)

Our observations are:

- The current assumption, 50% of Scale AA, is consistently lower (shows less improvement in longevity) than actual experience over the most recent 59 years (1950 – 2009) and the last 10 years (1999 – 2009) for both males and females.
- Scale BB is higher (greater improvement in longevity) than the average experience of males over the last 59 years and generally close to the average experience of females.
- Scale BB is lower than the average experience of both males and females over the most recent 10-year period (1999 – 2009) and higher than the average experience of both males and females over the 10-year period of the 1990s (1990 – 2000).
- The wide divergence in mortality improvement between the 10 years of the 1990s and the most recent 10-year period emphasizes that it is difficult to accurately project trends in mortality improvement over short periods of time.
- There has consistently been improvement in mortality over the long term.



Mortality (continued)

We looked at the mortality improvement assumptions being used by other neighboring retirement systems. Compared to Washington's current assumption of 50% of Scale AA:

- Full Scale AA is being applied generationally in: Oregon, Idaho, Seattle, Tacoma and Utah.
- Full Scale BB is being applied generationally in Wyoming.
- A variety of differing static mortality assumptions which are difficult to compare are being used by CalPERS, CalSTRS, Montana PERS, Montana TRS and Colorado.

With a change to the recommended Scale BB projection, Washington, along with Wyoming, would have the strongest projected improvement in mortality (i.e., the greatest expected increases in future life expectancies).

Private sector plans generally use IRS mandated static projections for both plan funding and accounting purposes.

In summary, It is generally accepted that mortality will continue to improve. No one knows how rapidly mortality will improve. There are many reasonable assumptions. We believe that OSA's recommendation of 100% of Scale BB is reasonable.

Merit and Longevity Salary Increases

The OSA studied the individual salary increases due to promotion and longevity – the merit component of salaries. These increases are in addition to the assumed increases due to general wage inflation (price inflation plus productivity and competitive wage pressure increases) discussed in the previous section. We believe the current assumption is reasonable.

The method varies merit increases based on each member's length of service. Members earlier in their careers (i.e., low levels of service) are expected to receive larger percentage increases than those later in their careers. We agree that service is the most significant factor in expected future merit increases, and this is the approach we generally recommend. Different scales are determined for different membership classes.

There are a variety of techniques used by actuaries to determine the merit component of salary increases. Data can be gathered regarding past pay increases, but subjectivity is involved in the determination of what is across-the-board productivity and what is merit.

Merit and Longevity Salary Increases (continued)

OSA gathered pay data from 1984 – 2009. The last few years were excluded, because they were believed to be unusual for pay increases. OSA studied all pay for people actively employed at the beginning and end of each valuation period. OSA summed all pay amounts for the entire time period studied to get total pay growth by years of service.

OSA assumed that cumulative pay growth attributable to merit matched the previous assumption for the cumulative growth. OSA used this to determine the implied productivity component of pay increases, which was then separated from the actual pay increases. An adjustment was made for LEOFF, because it was believed that the previous merit salary assumption was too high for this group, based on the fact that the implied productivity growth seemed too low.

Milliman's typical approach is to look at total increases by individual member on a year-by-year basis. The productivity component of the pay increases is estimated based on the increase in the average salary for the membership class over the year. Backing out the CPI and productivity provides an estimate of the merit increases for each individual and these can be used to determine historical merit increases.

We believe that the shape of the merit salary increase curve is supported by the historical data and that the resulting recommendations are reasonable.

Rates of Service Retirement

Separate tables for retirement assumptions by age are used for each membership class. For most classes of membership, separate assumptions are made for males and females. Assumptions for Plans 2 and 3 are combined, but separate assumptions are made for Plans 1. Combined assumptions were used for all of WSPRS.

No assumptions were studied with this experience study for those hired after May 1, 2013 with the new early retirement factors because the study period did not have any experience under the new factors.

We reviewed all of the recommendations made by OSA and found them all to be reasonable. We do have some observations.

For PERS, TRS, and SERS Plans 2 and 3, data from the 2008-2012 period was excluded, because it was considered unusual due to the Great Recession. Therefore, the data considered did not change from the previous period for these groups. Despite this, changes were made to the assumptions. The recommended changes do seem reasonable based on the data from 1995-2006 that was used. Recent data was used for Plans 1 and LEOFF Plan 2.

Rates of Service Retirement (continued)

We do have some concerns about disregarding that much data. It is likely true that actual retirements were fewer in the period due to the recession, particularly for Plan 3 members who saw their defined contribution (DC) account balances fall, making them less financially able to retire. To the extent that is the case, the next period may have more retirements than the long-term future trend, as the people who temporarily postponed retirement due to the recession become older and have their DC account balances recover. At the time of the next experience study, it will be important to consider this if the 2013-2018 data is included, but the 2007-2012 continues to be excluded.

Our preferred method is to consider the period of the previous study and the current study, but to give less weight to a period if it is believed to be unusual rather than disregarding it altogether.

Rates of Disability

We reviewed all of the calculations and recommendations made by OSA for rates of disability and found them to be reasonable. For LEOFF 2, the benefit structure changed in 2005, so only data after that date was used. For most plans, data back to 1995 was considered.

In addition to the disability rates, assumptions are made for what proportion of the disabilities are duty-related. For LEOFF 2, there is also an assumption for the percentage of duty disabilities that are catastrophic. Each of these types of disabilities has a different benefit. We suggested a change to the information provided by OSA regarding catastrophic disabilities and OSA reflected that change. We believe that the rates for total disabilities and the proportions for different types of disabilities are reasonable.

There is one specific aspect of the disability rates that we recommend OSA review for future valuations. The reduction factors applied to PERS, TRS and SERS members who take a disability retirement can result in a much lower benefit than if the member retired at 65. However, members with 30 years of service can retire at age 55 and later with a much smaller reduction. Therefore, it may be beneficial for members with 30 years of service but who are younger than age 55 to defer their retirement until age 55 instead of taking an immediate disability retirement. OSA currently assumes all these members will take an immediate disability retirement. We recommend that OSA review this either with the next valuation or experience study.

Rates of Termination (Withdrawal of Contributions and Vested Termination)

We reviewed all of the calculations and recommendations made by OSA for rates of termination of employment and found them to be reasonable. We agree with the methodology of using tables based on length of service. We find this to be the strongest predictor of the likelihood of terminating employment. Data from 1995 – 2010 was used. The reason for ending in 2010 is so people who are rehired soon after terminating employment are excluded from the calculations. We believe this is a reasonable approach.

It is interesting to note that PERS Plan 3 tends to have higher rates of termination than Plan 2. This makes intuitive sense, as those members more likely to stay with their employer would be more inclined to choose the plan with the greater defined benefit component, which is Plan 2.

Note that for the study of termination rates, OSA included those who are eligible for early retirement. Those people were also included in the analysis for the retirement decrement. When applying the decrements in the actuarial valuation, only the retirement decrement assumptions are used for these members. This methodology may result in lower termination rates than would be seen if these people were excluded from the termination analysis. This will only impact people with enough service to retire and the termination rates are low for people with service that high. We recommend that consideration be given to excluding people eligible for early retirement from the termination analysis at the time of the next experience study.

Other Assumptions

We reviewed the calculations and recommendations for the following assumptions and found them to be reasonable. We provide additional commentary for some of the items.

Average Final Compensation Load: Members in PERS 1, TRS 1, and WSPRS 1 are eligible for payments that can increase Average Final Compensation. OSA received data from DRS regarding those payments and developed a load based on that information.

LEOFF 1 members are not entitled to those same payments. However, OSA found that Average Final Compensation does tend to be higher than would be predicted by the compensation in years prior to retirement. For this reason, OSA developed a load this year. This assumption is new with this experience study. DRS did not have data separating extra pay elements, so the load had to be estimated by comparing Average Final Compensation to what could be predicted by data in previous pay periods.

Other Assumptions (continued)

Age Difference with Spouse at Retirement Date: Used to assign ages for future retirees. Studied by system, but found little difference by system. OSA recommended a change for male spouses of female retirees.

Military Service Credit Load: Only impacts Plans 1 of PERS and WSPRS.

Portion Taking Annuities versus Withdrawal of Contributions upon Termination: Increases with years of service. Varies by membership class and plan.

Dependent Children of LEOFF 1 Retirees: Only impacts some dependent children of future LEOFF 1 disabled retirees and surviving spouses.

Certain Period: If a retired member dies before the total pension payments received exceed the value of the accumulated contributions, the difference is paid to the beneficiary or estate. OSA approximates the value of this by estimating a "certain period," where the member is effectively assumed to be guaranteed to receive payments for a certain number of years.

Percent Male / Female: Used to estimate proportion of each sex when data not available. Note that data is available for all but a few people out of several hundred thousand records.

Percent Duty Death: Since benefits vary by the type of death, an assumption is needed for which deaths are duty-related.

Percent of Average Final Compensation Paid for Total Disability Benefit: Applies for LEOFF 2 Plan only. Adjustments are sometimes necessary because of limits after reflecting benefits from Social Security.

Maximum/Minimum/Default Salaries and Ages: Applied for outliers and those with little service. Because benefits are limited by IRC 401(a)(17), the maximum salary does not impact benefit levels. Different approaches are taken for different membership classes, but all calculations are accurate and recommendations are reasonable. Many of the new recommendations for defaults will not be implemented until the 2014 valuation.

WSPRS Disabled Life Expectancy: Used to help estimate value of a benefit for the surviving spouses of deceased WSPRS disability retirees.

Other Assumptions (continued)

Terminated Vested Indexed Benefit: Only applies for those in Plans 3 who delay retirement if they terminate employment and have 20+ years of service.

TRS Salary Bonus: There are two new programs that enable teachers to get bonuses that are included in pensionable pay. Expected to have a slightly increasing proportion of teachers receiving these benefits. Has a small impact on TRS salary projections and does not impact other membership classes.

Portability: Chapter 41.54 of the RCW allows for “portability” of benefits with the city employee retiree systems for Seattle, Tacoma, and Spokane. No assumption is currently made to reflect this. It is our understanding that OSA will research this for the 2014 valuation.

OPEB Costs for Future Disabled Members after Medicare Eligibility: For active employees assumed to become disabled in the future, some of the medical benefits do not reflect the decreased premiums once the member reaches Medicare eligibility at age 65. It is our understanding that OSA will review this issue at the time of the upcoming OPEB experience study. The total value of this benefit is extremely small, so any potential change would not have a material impact.

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**Pension Funding Council and LEOFF 2 Board
Actuarial Audit of 2013 Actuarial Valuation
and 2007-2012 Demographic Experience Study**

Section 8 Review of Previous Reports and Recommendations from Prior Audit

Audit Conclusion



Because the final 2007-2012 Experience Study and 2013 Actuarial Valuation reports have not been completed at this time, we base the comments in this section on the previous reports. Overall, we found OSA's reports to be very thorough. We have made a few comments for consideration for the upcoming reports that may enhance an outside reader's understanding. All of these comments are related to additional disclosure, and, if implemented, none would have an impact on the contribution rates.

We have also reviewed the comments from the prior actuarial audit and reported on the incorporation of those comments. Most of the recommendations were implemented. Of those that were not implemented, we do not consider any of them to be material.

**Comments
Regarding OSA's
Reports**

In our opinion, OSA's valuation report satisfies Actuarial Standard of Practice No. 41 dealing with actuarial communications.

We also believe that OSA's reports reviewing the economic assumptions and studying the actuarial experience satisfy the relevant actuarial standards.

We offer the following comments on the 2012 Actuarial Valuation Report:

- We feel that the text on page 15 could be expanded to provide further explanation of the tables that follow on pages 16 and 17. Much of the explanation for those tables is found on page 53 of the report with the Actuarial Cost Methods section of the appendices. At a minimum, page 15 should reference that section of the appendices. OSA may find some of our description of the funding policies in Section 5 of this report useful. The State's funding policies, due to their complex nature, are difficult to summarize and explain. We would be glad to work together with OSA to add detail to the valuation report that would clarify the description of the funding policies and the related citations to the RCW. We have also included specific suggestions for changes to text and labels below.

**Comments
Regarding OSA's
Reports
(continued)**

- On page 15, it is stated that the minimum contribution rates are a percent of normal cost calculated under the Entry Age Normal funding method. We think it should be clear that the percentage is 90% for LEOFF, 70% for WSPRS, and 80% for the other membership classes. If maintained in its current form, we suggest the text be re-written as suggested later in this section.
- In pages 15-17, the term “normal cost” is used to indicate multiple things, and in some cases seems to be used to refer to contribution rates that were not equal to any specific normal cost rate because they include amounts to amortize past liability balances at fixed rates and minimum contribution rates, based on some percentage of the Entry Age Normal Cost. This could potentially be confusing to the reader.
- The first sentence of the text on page 15 and item 3 on page 16 use the term “normal cost” to refer to the employee and employer contribution rates for Plan 2/3. We suggest the text on page 15 be rewritten to use the phrase “employee contribution rates for Plans 2 and the employer contribution rates for all Plans” instead of the “normal cost rates.” Combined with the comment above this would change the text on page 15 to:

“The tables on the following two pages show the development of the employee contribution rates for Plans 2 and the employer contribution rates for all plans. Consistent with the current funding policy, these contribution rates include minimum contribution rates to provide stable and adequate contribution rates over time. The minimum contribution rates (before adjustment for rates to amortize past liability balances) are 90% of the Entry Age Normal Cost (EANC) for LEOFF 2, 70% of the EANC for WSPRS [RCW 41.45.0631], and 80% of the EANC for all other employer and employee classes except for PSERS members [RCW 41.45.155 and RCW 41.45.158].”

We suggest the heading for Section 3 on page 16 be changed from “Normal Cost Rates Adopted for 2013 – 15” to “Plans 2 and 3 Contribution Rates Adopted for 2013 – 15.”

We suggest the heading at the top of page 16 be changed from “Development of Normal Cost Rates” to “Development of Plan 2 and 3 Contribution Rates.”

**Comments
Regarding OSA's
Reports
(continued)**

- The term normal cost rate is used for the normal cost under the aggregate actuarial cost method (lines 1.k. and 2.k. on page 16). We believe that lines 1.k. and 2.k. should explicitly refer to the Normal Cost under the Aggregate actuarial cost method and suggest they be labeled "Employee Aggregate Normal Cost Rate" and "Employer Aggregate Normal Cost Rate."
- Line a. in the chart on the top of page 15 uses the phrase "Total Normal Cost" when we believe it is actually the sum of the "Plan 2/3 Employer Contribution" rate above and the member contribution rate. We think the chart would be clearer, as shown in the following example, using only PERS.

PERS		
	Plan 1	Plan 2
a. Employer Rate calculated for Plan 2/3	4.94%	4.94%
b. Plan 1 UAAL Rate	4.21%	4.21%
c. Total Employer Contribution Rate (a + b)	9.15%	9.15%
Employee Contribution Rate	6.00%	4.83%
Total Plan Contribution Rate	15.15%	13.98%

- On page 16, it appears that 2.d. is equal to (1.g + 1.h.) x 1.k. We believe that the label should reflect that.
- On page 17, we are not sure of the meaning of line g. Note that it has no impact on the calculation as it is listed as N/A for PERS and TRS, and zero for LEOFF.
- On page 17, we believe that the PERS Plan 1 column, line j. is the present value of projected salaries over the next 10 years and includes all three PERS plans, plus PSERS and SERS. Similarly, the TRS Plan 1 column includes all TRS plans, and the LEOFF Plan 1 column includes both LEOFF plans. This is done in accordance with the funding policy, but the footnote for this item could help clarify what is listed.
- On page 39, the LEOFF 1 Funding Method Changes are not described.
- On page 40, the "Correction Change" for WSPRS is not described.

Comments Regarding OSA's Reports (continued)

- On page 53, we think it should be made clear that all employers pay the sum of the Plan 1 UAAL amortization and the employer share of the Plan 2/3 Normal Cost. As mentioned previously, we think it would be helpful if much of the explanation on this page were moved to pages 15-17 where the calculations are made. Also, as previously stated we believe OSA may find some of our description of the funding policies in Section 5 of this report useful. Again, we would be glad to work together with OSA to add detail to the valuation report that would clarify the description of the funding policies and the related citations to the RCW.
- On page 68 and 70, it might be clearer to have a footnote to indicate that for LEOFF 1 the offsets are applied to the RP-2000 Healthy Combined Mortality Table, whereas for all other systems, the disabled mortality is based on the RP-2000 Disabled Mortality Table.

Recommendations from Prior Audit

Recommendations Addressed

- The prior auditor suggested that the OSA consider disclosing funded ratios using the Entry Age Normal (EAN) Actuarial Cost method instead of the Projected Unit Credit (PUC) method. OSA elected to use PUC for one more valuation. It is our understanding that this will change with implementation of GASB Statements No. 67 and No. 68, which mandate the use of EAN.
- OSA now uses a full year rather than 364/365ths of a year in the calculation of the actuarial value of assets.
- As is soon to be required for GASB 67 and 68, OSA changed the EAN calculation to be a level percentage of pay throughout each employee's career, rather than over each decrement. It is our understanding that this was changed for the 2012 actuarial valuation.
- The entry age calculation is now based on the date that the employee entered the current plan. It is our understanding that OSA made this change for PSERS in the 2011 actuarial valuation and for the other plans in the 2012 actuarial valuation.
- OSA changed its description of how survivors selecting annuities under LEOFF Plan 1 and WSPRS Plan 1 are valued.
- A correction was made for the refund benefit for duty death for certain WSPRS 2 and LEOFF 2 members. It is our understanding that OSA made this change in the 2012 actuarial valuation.
- OSA removed a COLA adjustment for a survivor benefit for WSPRS disabled members with the 2012 actuarial valuation.

Recommendations from Prior Audit (continued)

- OSA changed the early retirement reduction factors for WSPRS 2 non-duty death to be based on age and service rather than just age.
- Some changes regarding the valuation of OPEB were made. These are benefits paid to the surviving spouses and children of LEOFF 2 and WSPRS members who die in the line of duty, along with the families of LEOFF 2 members with catastrophic disabilities.
 - It is now noted in the summary of assumptions that 85% of future disabled members and 100% of currently disabled members have spouses.
 - The probability of death for an active employee is now based on the age and sex of the employee.
 - Liabilities for surviving children are now valued.
 - It is our understanding that OSA is planning a review of OPEB assumptions in the next two years.
 - The description of the benefits has been expanded in the actuarial valuation report.
- OSA expanded its disclosures of methods and assumptions in the 2012 actuarial valuation report based on suggestions from the prior actuarial audit report.

Recommendations Not Addressed

We do not believe that any of these items have a material impact on the actuarial valuation.

- The prior auditor had a comment related to the fact that there were small discrepancies between the end of year market values of assets provided by DRS and WSIB. As mentioned in the Actuarial Value of Assets Section of this report, these discrepancies continue. Per our conversation with OSA, the DRS values are used for the market value of assets required for the calculation of the actuarial value of assets.
- The prior auditor had a recommendation which would impact projected benefits for survivors of those who die while employed electing an annuity when the lump sum alternative is more valuable. The potential effect of this recommendation was considered immaterial.

Recommendations from Prior Audit (continued)

- One OPEB-related recommendation was not made. This item is not material to the overall valuation of the system-wide benefits.
 - For active employees assumed to become disabled in the future, medical benefits are only increased for healthcare trend (sometimes referred to as healthcare inflation) up to the time of the disability. In other words, once the benefit payments are assumed to begin, they are projected to remain level, with no additional trend-related increases.



Adoption of 2015 Meeting Dates

ATTACHMENTS:

Description	Type
 2015 Proposed Board Meeting Dates	Report



2015 PROPOSED MEETING DATES

JANUARY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL						
S	M	T	W	T	F	S
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12	13	14	15	16	17	18
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26	27	28	29	30		

JULY						
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OCTOBER						
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FEBRUARY						
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MAY						
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31						

AUGUST						
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NOVEMBER						
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MARCH						
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JUNE						
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SEPTEMBER						
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DECEMBER						
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

State Holidays

Legislative Session

Proposed Board Meeting Dates

January 28

February 25

March 25

April 22

May 27

June 24

July 22

August 26

September 23

October 28

November 18

December 16

MEETING LOCATION

STATE INVESTMENT BOARD
Large Conference Room
2100 Evergreen Park Drive SW
Suite 100
Olympia, WA 98502

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Agenda Items for Future Meetings

ATTACHMENTS:

Description	Type
 Agenda Item Calendar	Report



2014 AGENDA ITEMS CALENDAR

MEETING DATE	AGENDA ITEMS
January 22, 2014	2014 Legislative Update
February 26, 2014	2014 Legislative Update
March 26, 2014	2014 Legislative Update 2014 Interim Planning
April 16, 2014	Meeting Cancelled
May 28, 2014	Local Government DCP Participation, Initial Consideration Final Average Salary Protection, Initial Consideration Alternate Revenue Update SCPP Coordination Demographic Experience Study Education – OSA Annual Attorney General Training – Dawn Cortez, AAG Parliamentary Procedure Review – Dawn Cortez, AAG
June 18, 2014	Contribution Rate Setting Contribution Rate Preview – OSA Demographic Experience Study Recommendation – OSA DRS Benchmarking – Mark Feldhausen, Budget and Benchmarking Director Actuarial Audit Presentation – Mark Olleman, Milliman Alternate Revenue, Educational Briefing
July 23, 2014	Funding Pension Plan Benefits – Robert Klausner, Esquire Experience Study and Actuarial Valuation Update – Lisa Won, Actuary Actuarial Audit Presentation – Mark Olleman & Daniel Wade, Milliman Contribution Rate Adoption – Ryan Frost
August 27, 2014	Meeting Cancelled
September 24, 2014	Salary Spiking Career Extension Supreme Court Decision Update FY14 Independent Audit Results, Steve Davis Washington State Investment Board Annual Update – Theresa Whitmarsh, SIB DRS Annual Administrative Update – Marcie Frost, DRS
October 22, 2014	Strategic Planning – Off Site 2015 Proposed Meeting Calendar
November 19, 2014	Social Security Bridge Option, Initial Consideration Final Average Salary Protection, Comprehensive Report Career Extension, Comprehensive Report Remarriage Prohibition, Comprehensive Report 2015 Meeting Calendar Adoption
December 17, 2014	Local Government DCP Participation, Comprehensive Report Plan Design Education, Educational Briefing Governance Practices/Board Evaluation Review of Historical Benefit Improvement Studies