



Adopting Administrative Factors

**Final Proposal
December 18, 2013**

Issue

- The Board has the authority to adopt administrative factors for LEOFF Plan 2 based on recommendations from the Office of the State Actuary (OSA).
- The factors adopted by the Board in 2012 did not include restoration factors.

Example: Restoring Service After Deadline

“Average” LEOFF Plan 2 member:



Hired age 29



Worked 5
years



Quit and
withdrew



Returned to
membership
2 years later



Worked 9 more
years; age 45;
\$85,000 FAS

6% Increase in Cost to Restore After 5-year Deadline:

- \$95,412.50 under current factors
- \$100,835.50 under proposed factors



Board Direction

The Board directed staff to present the new factors for adoption at the December meeting to be effective October 1, 2014.

- The new factors are attached to the final proposal as appendix B.
- *Motion required.*

Any Questions?

- **Contact:**

Paul Neal

Senior Legal Counsel

360.586.2327

paul.neal@leoff.wa.gov

2100 Evergreen Park Dr, Olympia, WA 98502
PO Box 40918 Olympia, WA 98504
360.586.2320 or www.leoff.wa.gov





December 18, 2013

ADOPTING ADMINISTRATIVE FACTORS

FINAL PROPOSAL

By Paul Neal
Senior Legal Counsel
360-586-2327
paul.neal@leoff.wa.gov

ISSUE

The Board adopted new administrative factors for LEOFF Plan 2 in 2012. At that time the State Actuary (OSA) noted the factors are used to compute the cost of restoring service credit for persons who have missed the statutory deadline (restoration factors) would be presented later. OSA has now provided the remaining factors and recommends the Board exercise its authority to adopt them.

PROPOSAL SUMMARY

The Board can either adopt the new administrative factors recommended by OSA or decline to do so. After considering the Actuary's proposal at its November 20th meeting, the Board directed staff to present the factors for adoption at the December meeting, effective October 1, 2014.

MEMBERS IMPACTED

Any change to the existing LEOFF Plan 2 administrative factors could impact all active members, employers and the state. As of June 30, 2012 there were 16,720 active members as reported in the Office of the State Actuary's *2012 Actuarial Valuation Report*.

CURRENT SITUATION

The Board adopts any changes to the administrative factors. These can be done at any time, but usually follow changes in the economic or demographic assumptions. The most recent assumption changes adopted by the Board were effective in January 2012. The Board adopted the bulk of the factor changes flowing from that decision in 2012, but had yet to be presented with the revised restoration factors. Those factors are now before the Board for consideration.

BACKGROUND INFORMATION & POLICY ISSUES

Any time the underlying economic or demographic assumptions are changed, their impact on the administrative factors need to be reviewed and determined whether or not those factors should be changed. The Board adopted new factors effective January 1, 2010 based on the 2001-2006 demographic experience study.

When adopting last year's administrative factors the Board decided to coordinate the adoption of the LEOFF Plan 2 factors so they would be available for public review and adopted on the same schedule as

the parallel factors adopted by DRS for the other plans. To track DRS's schedule for adoption of the new restoration factors, the Board would publish the proposed factors on its website following the November meeting and adopt the factors at the December meeting to be effective October 1, 2014.

Restoring service credit after the deadline is roughly 6% more expensive under the new factors. There are two reasons for this increase in costs: 1) The Board's reduction of the long term interest rate assumption from 8% to 7.5%; and 2) a change in methodology to account for the increased cost due to subsidized early retirement factors¹.

The following examples show how the factor changes would affect members seeking to purchase service. For purposes of the example we looked at the average active member. We assumed a LEOFF Plan 2 member originally hired at age 29 who worked for 5 years, then quit and withdrew contributions. We further assumed the person returned to LEOFF employment 2 years later, worked an additional 9 years and is now 45.

Assuming the person's average final compensation is \$85,000, the change in cost to restore the withdrawn service credit is:

- Cost to restore the prior 5 years of service under the current factors: **\$95,412.50**
- Cost to restore the prior 5 years of service under the factors recommended by the Actuary: **\$100,835.50.**

Again, this is approximately a 6% increase.

SUPPORTING INFORMATION

Appendix A: 2012 Letter from the Office of the State Actuary
2012 letter reserving restoration factors for later adoption

Appendix B: 2013 Letter from the Office of the State Actuary
Update of restoration factors

¹ When the original factors were developed there was no subsidized LEOFF Plan 2 early retirement, thus those costs were not included in the original model.



Office of the State Actuary

"Securing tomorrow's pensions today."

November 21, 2012

Mr. Steve Nelsen, Executive Director
Law Enforcement Officers' and Fire Fighters' Plan 2 Retirement Board
PO Box 40918
Olympia, Washington 98504-0918

RE: LEOFF 2 ADMINISTRATIVE FACTORS UPDATE

Dear Steve:

We have completed our update of several administrative factors for use in the Washington Administrative Code (WAC). During the project to update these administrative factors, we amended them as a result of the changes to the economic assumptions adopted by the Law Enforcement Officers' and Fire Fighters' Plan 2 (LEOFF 2) Retirement Board (Board) during the 2011 Interim. The amended administrative factors also include an update to the projected mortality improvements to reflect more current data.

As a result of this project, please find attached the following updated actuarial tables for the Boards approval.

- ❖ Early retirement factors for WAC 415-02-320 (**Appendix B**).
- ❖ Monthly benefit per \$1.00 of accumulation for WAC 415-02-340 (**Appendix C**).
- ❖ Joint and survivor option factors for WAC 415-02-380 (**Appendix D**).

Administrative factors should be reviewed and, if necessary, updated any time the underlying demographic or economic assumptions for the plan change. The tables will be updated again after our 2007-2012 *Demographic Experience Study*. They could also change with new member options or benefit changes in the future.

The attached appendices contain supporting information for each factor we updated. **Appendix A** supplies general information about data, assumptions, and methods used to develop the factors. **Appendices B through D** provide more detailed information about each of the individual factors. All of the appendices should be used together with this cover letter to form a complete actuarial communication.



LEOFF 2 Administrative Factors Update
Page 2 of 15

We developed the administrative factors based on our understanding of how the Department of Retirement Systems (DRS) applies them and according to policy decisions made by the Board. The policy decisions were documented in our previous letter dated August 26, 2009, and have been updated to reflect more current data. We intend this communication to be used by the Board and DRS only. If a party other than the Board or DRS reads this communication, they should address questions to the Board or DRS and seek professional guidance with the content and interpretation of this communication.

In my opinion, all of the data, assumptions, and methods we used in developing the administrative factors are reasonable and appropriate for this project. The use of another set of assumptions and methods, however, could also be reasonable and could produce materially different results.

The economic assumptions we used for updating the factors were adopted by the Board in the 2011 Interim. We were responsible for the selection of the demographic assumptions. In my opinion, all methods, assumptions, and calculations are reasonable and in conformity with generally accepted actuarial principles and standards of practice as of the date of this letter.

We have not included the service credit restoration factors for [WAC 415-02-370](#) in this communication. These factors will follow in a separate communication.



LEOFF 2 Administrative Factors Update
Page 3 of 15

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

Please let me know if you have any questions concerning these administrative factors or the assumptions and methods used to develop them.

Sincerely,

Lisa A. Won, ASA, FCA, MAAA
Actuary

cc: Kelly Fox,
LEOFF Plan 2 Retirement Board
Marcie Frost,
Department of Retirement Systems
Shawn Merchant,
Department of Retirement Systems
Matt Smith,
Office of the State Actuary
Kyle Stineman,
Office of the State Actuary

Attachments

Appendix A – General Data, Assumptions, and Methods
Appendix B – Early Retirement Factors
Appendix C – Monthly Benefit Per \$1.00 of Accumulation
Appendix D – Joint and Survivor Option Factors

N:\OSA\Option Factors\2012\2012_LEOFF_2_Administrative_Factor_Summary.docx



Office of the State Actuary

"Securing tomorrow's pensions today."

December 11, 2013

Mr. Steve Nelsen
Executive Director
LEOFF 2 Retirement Board
PO Box 40918
Olympia, Washington 98504

RE: LEOFF 2 SERVICE CREDIT RESTORATION FACTORS

Dear Steve,

We have completed our update of the Service Credit Restoration Factors (SCRF) for use in the Washington Administrative Code. These factors allow the Department of Retirement Systems (DRS) to calculate the Actuarial Equivalent (AE) cost for members to restore prior service credit under RCW 41.50.165. The SCRF include changes to the underlying assumptions as part of the Office of the State Actuary's (OSA) [2001-2006 Demographic Experience Study](#) (DES) and economic assumptions adopted by the Board.

Administrative factors should be reviewed and, if necessary, updated any time the underlying demographic or economic assumptions for the covered retirement systems change. For instance, the SCRF could change after our 2007-2012 DES. It could also change with new member options or benefit changes in the future.

The attached appendix contains supporting information for the development of the SCRF. **Appendix A** supplies general information about the data, assumptions, and methods we used to develop the SCRF. The attached spreadsheet contains the finalized SCRF. The appendix and spreadsheet should be used together with this cover letter to form a complete actuarial communication.

We developed the SCRF based on our understanding of how DRS will apply it and according to policy decisions made by the Board. We intend this communication to be used by DRS and the LEOFF 2 Board only. If a party other than DRS or the Board reads this communication, they should address questions to DRS and seek professional guidance with the content and interpretation of this communication.

In my opinion, all of the data, assumptions, and methods we used in developing the SCRF are reasonable and appropriate for this project and are in conformity with generally accepted actuarial principles and standards of practice as of the date of this letter. The use of another set of assumptions and methods, however, could also be reasonable and could produce materially different results. The economic assumptions



we used for updating the factors were adopted by the Board consistent with RCW 41.45.030. We were responsible for the selection of the demographic assumptions.

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

Please let me know if you have any questions concerning this communication, the updated administrative factors, or the assumptions and methods used to develop them.

Sincerely,

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

cc: Shawn Merchant, Department of Retirement Systems
Dave Nelsen, Department of Retirement Systems
Matthew Smith, Office of the State Actuary
Michael Harbour, Office of the State Actuary

Attachment: SCRF for LEOFF 2 – OSA 12-2013.xlsx



APPENDIX A – DEVELOPMENT OF THE SCRF

Purpose

We updated the prior Service Credit Restoration Factors (SCRF) and determined the adopted factors no longer achieve Actuarial Equivalence (AE) at the plan level under the prior methodology. The previous factor development model was created prior to the early retirement benefit improvements, so the SCRF assumed benefits were deferred to Normal Retirement Age (NRA) with AE reductions for early retirement. The new SCRF produce a higher cost for members who have the opportunity to benefit from subsidized early retirement.

In addition, these factors needed to be updated to include the assumption changes from the [2001-2006 Demographic Experience Study](#) (DES) and economic assumptions adopted by the Board.

Data

We relied on the [June 30, 2012, Actuarial Valuation Report](#) (AVR) data whenever necessary to develop the administrative factors. Please see the *Actuarial Certification Letter* in the 2012 AVR for further considerations on the data we used.

Assumptions

We relied on the following key assumptions to develop the new SCRF.

- ❖ **Actuarial Equivalence:** We developed the new SCRF assuming members commence receiving their retirement benefits at NRA, or immediately for post-NRA restorations. We documented the retirement eligibilities for LEOFF 2 in the table below. We did not include assumptions for pre-retirement mortality, termination, or disability. Also, we applied an adjustment for members who have the opportunity to benefit from subsidized early retirement. Under these circumstances, we increased the age-based SCRF by the weighted average of (i) the increase in their benefit from more favorable ERFs and (ii) the likelihood that they will retire. We used the retirement rates as disclosed in the 2012 AVR.

In addition, we've added a second step that includes the cost for the increased value of the member's past service if it is available at a subsidized retirement age due to the addition of the restored service. This step will result in no additional cost if the restored service does not change the member's ability for subsidized retirement.



System	Normal Retirement Eligibility (Age/Service)	Early Retirement Eligibility (Age/Service)	Subsidized Early Retirement (Age/Service)
LEOFF 2	53/5	50/20	50/20

- ❖ **Economic Assumptions:** We used the following economic assumptions.

System	Interest	Annual COLA	Salary Growth
LEOFF 2	7.5%	3.0%	3.75%

- ❖ **Mortality Assumptions:** We used the projected mortality assumptions as disclosed in the AVR for the underlying mortality assumptions.
- ❖ **Mortality Blending:** These factors only apply for restorations by active members. Therefore, we did not blend disabled mortality rates with healthy mortality rates in their development.
- ❖ **Percent Male/Female:** We assumed percent male/female for primary members as shown in the table below. These percentages match those in the 2001-2006 DES.

System	Percent Male	Percent Female
LEOFF 2	90%	10%

- ❖ **Certain Period:** We apply a certain period to the NRA annuity factors to cover the guaranteed “refund of contributions provision” in the case that a member dies before all of their contributions have been paid out in the monthly benefits. This certain period matches the 2001-2006 DES.

System	Certain Period
LEOFF 2	5

Methods

Development of Underlying Annuity Factors

The next table displays detailed information about how we developed the deferred and immediate annuity factors.



Annuity Factor Details		
	Deferred Annuity	Immediate Annuity
Annuity Type	Single-Life	Single-Life
Payment Commencement	Deferred to NRA	Immediate
Payment Frequency	Monthly	Monthly
Payment Timing	End of Period	End of Period
COLA Increase Frequency	Annual	Annual

Other Information

The new format we developed for the SCRF includes a two-dimensional table. Specifically, the dimensions are *Current Age* by *Total Service After Restoration*. The cost paid by the member equals their AFC, times the sum of Part 1 plus Part 2.

- Part 1. (i) the number of years to be restored, times (ii) the table factor at their current age and service amount with the restoration;
Plus;
- Part 2. (iii) their service prior to the restoration, times (iv) the difference between
(a) the table factor including restored service, minus;
(b) the table factor based upon service before the restoration.

Part 2 of this equation accounts for the cost of receiving benefits on past service at a subsidized retirement age resulting from the restored service. Here's an example calculation for an age 45 LEOFF 2 member with nine years of current service, five years of service to be restored, and a \$85,000 AFC.

$$\$85,000 \times \{(5 \times 0.2342) + [9 \times (0.2342 - 0.2325)]\} = \$100,835.50$$

Dual members with eligible portability service have a more complicated Part 2 cost. The methodology we applied is based on our understanding of how DRS administers the portability rules, as follows:

(1) Current service credit for dual members should include service credit from all portable systems and plans;

(2) Average salary for dual members should be based on the highest average salary between the portable systems and plans;

(3) The Part 1 SCRF used should be for the plan in which the service is being restored, even if it is not the active system; and,

(4) The Part 2 cost will need to use SCRFs from each plan based on the total current service level as defined in (1) above and restored service. The difference in factors for each plan is then applied to the current service of that plan.



Please see the attached spreadsheet for the new SCRF. Note that the factors can be linearly interpolated between each integer age and service value provided in the spreadsheet.

N:\OSA\Option Factors\2013\L2_Service_Credit_Restoration_Factors.docx