

LAW ENFORCEMENT OFFICERS' AND FIRE FIGHTERS' PLAN 2 RETIREMENT BOARD

Mortality Assumptions Initial Consideration

September 13, 2006

1. Issue

Should actuarial assumptions and cost methodology regarding mortality, or life expectancy, be changed as part of the 2005 Actuarial Valuation and used to calculate LEOFF Plan 2 contribution rates for the 2007-07 biennium?

2. Staff

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3. Members Impacted

As of September 30, 2005 there were 15,168 active members, and 574 retirees as reported in the draft results of The Office of the State Actuary's *2005 LEOFF Plan 2 Actuarial Valuation Report* presented to the Board on August 23, 2006. Changes in actuarial assumptions and/or methodology that affect contribution rates would impact all LEOFF Plan 2 members, as well as all LEOFF Plan 2 employers and the State.

4. Current Situation

The Washington State Law Enforcement Officers' and Fire Fighters' (LEOFF) Plan 2 Retirement Board was created by Initiative 790, passed by the people of Washington State in November 2002 and became effective in July 2003. The powers and duties of the Board include the requirement that the Board shall adopt actuarial tables, assumptions and cost methodologies in consultation with an enrolled actuary retained by the Board [RCW 41.26.720].

The preliminary results of the *2005 Actuarial Valuation* which were presented to the Board in August 2006 by the Office of the State Actuary incorporated a change to the actuarial assumptions regarding life expectancy and a change in the actuarial methodology used for applying life expectancy assumptions to determine plan liabilities. Neither the change in life expectancy assumption, nor the change in methodology has been adopted by the Board.

5. Background Information and Policy Issues

Projected Improvements in Life Expectancy

In 1994, the Society of Actuaries (Society) adopted an updated life expectancy table (UP94) for use by actuaries in calculating plan liabilities. Concern over setting up adequate reserves for insurance companies also led the Society to create the Group Annuity Reserving Table in 1994, which incorporated projected future improvements in life expectancy known as “**Scale AA.**” Insurers are required to use this mortality table for minimum reserve calculations for group annuities in a majority of the States.

The UP94 report produced by the Society of Actuaries strongly encouraged actuaries for public pension plans to incorporate the Scale AA projected improvements in life expectancy into calculations of plan liabilities. Scale AA is based on mortality improvement trends among Civil Service Retirement System and Social Security participants between 1977 and 1993. It is the most current mortality improvement table produced by the Society of Actuaries.

The recognition of future increases in life expectancy is consistent with current standards of actuarial practice. Since 1994, Scale AA projected improvements in life expectancy, have been utilized by some public plans in the United States. The Oklahoma Teachers’ Retirement System utilizes full Scale AA projections to report to their Legislature. The Massachusetts Public Employees’ Retirement Plan utilized Scale AA in 2000 to project assumptions forward ten years to 2010. Other plans, such as California State Teachers’ Retirement System incorporate some kind of adjustment for projected improvements in life expectancy but do not specifically use Scale AA. The majority of public pension plans in the United States, including all the public pension plans in Washington State, have not yet incorporated Scale AA into their liability calculations, and its use is not required by the standards of practice for the Society of Actuaries. However, Actuarial Standard of Practice No. 35 (Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations) indicates the following:

- “Mortality Assumption---The actuary should consider factors such as the following:
- a.
 - b. the likelihood and extent of mortality improvement in the future;”

The preliminary 2005 Actuarial Valuation for LEOFF Plan 2 presented to the Board in August 2006 by the Office of The State Actuary incorporated 50% of the Scale AA projected improvements in life expectancy into the calculations of plan liabilities. The effect of this change is an increase in plan liabilities of approximately \$178 million.

Separate Life Expectancy Assumptions for Active Members and Retirees

The Office of the State Actuary published the *1995-2000 Actuarial Experience Study* in January 2002, which adjusted actuarial assumptions for life expectancy, probability of retirement, probability of disability, employment turnover, salary increases due to longevity

(rather than inflation), and other demographic assumptions such as the likelihood of a retiree being married and the average age difference between the member and their beneficiary. The *1995-2000 Experience Study* covered all retirement plans, including LEOFF Plan 2, and was used as the basis for recalculating actuarial reduction factors for early retirement and survivor benefits. The *1995-2000 Experience Study* also incorporated the latest life-expectancy table developed by the Society of Actuaries (RP-2000).

The RP-2000 Report by the Society of Actuaries included a recommendation that separate life expectancy tables be used for active members and retirees. However, the *1995-2000 Actuarial Experience Study* published by the Office of the State Actuary in January 2002, used a blended life expectancy table rather than separate tables. Experience studies in Washington take place every six years. The next experience study is scheduled for publication in 2008 based on information from 2001-2006.

The preliminary *2005 Actuarial Valuation* for LEOFF Plan 2 presented to the Board in August 2006 by the Office of The State Actuary incorporated separate life expectancy tables for active members and retirees into the calculations of plan liabilities. However, questions concerning the impacts of this change arose during the audit of the *2005 Actuarial Valuation* conducted by an independent actuary retained by the Board. The Office of the State Actuary now supports studying the impacts of this table change further and adjusting the tables, if necessary, in conjunction with the next experience study. The result of continuing to use a combined mortality table is an increase in plan liabilities. However, the amount of the increase is unknown at the time of this report.

Changes to Actuarial Reduction Factors used in Benefit Administration

The Department of Retirement Systems adopted updated early retirement reduction factors and survivor benefit factors based on the results of the *1995-2000 Actuarial Experience Study* as recommended by the Office of the State Actuary. New early retirement reduction factors and survivor benefit factors may be appropriate if the Board were to adopt changes to current life expectancy assumptions. Generally, increased life expectancy assumptions results in increased early retirement reduction factors and decreased survivor benefit reduction factors.

6. Policy Options

A. Projected Improvements in Life Expectancy

The Board can either adopt 50% of the Scale AA projected improvements in life expectancy as recommended by the State Actuary or defer adoption of projected future improvements in life expectancy and examine the issue, and other possible policy options, such as utilizing 100% of Scale AA, in conjunction with the next experience study.

B. Separate Life Expectancy Assumptions for Active Members and Retirees

The Board can either adopt the change to separate tables as recommended by the Society of Actuaries and included in the preliminary results of the *2005 Actuarial Valuation* by the

Office of the State Actuary or defer adoption of any table changes and examine this issue further in conjunction with the next scheduled experience study.

C. Changes to Actuarial Reduction Factors used in Benefit Administration

The Board could either ask the Office of the State Actuary to prepare updated early retirement and survivor benefit factors, based on any changes to life expectancy assumptions, or defer adoption of new actuarial factors until completion of the next experience study, when adjustments to these same factors for mortality experience and changes to other demographic assumptions will be necessary.