LEOFF
Plan 2 Retirement Board

Promoting Individual Savings for Retirement

Comprehensive Report Follow-up

November 20, 2013

Issue

Members are not able to take advantage of a recent IRS rulings which provides new options for managing savings in retirement.

2012 IRS Ruling

- **Internal Revenue Bulletin 2012-8 issued February 21, 2012.**
  - Allows a member of a 401(a) defined benefit plan to annuitize tax deferred retirement savings.
  - Allow employees to maintain a “sidecar” savings account within defined benefit trust fund.

LEOFF Plan 2 Retirement Board

2010 Federal Legislation

The Small Business Jobs Act of 2010 authorized governmental 457 plans to adopt Roth provisions.

- Contributions are taxed in the year earned, distributions after retirement are not taxed.
- DRS could authorize:
  - Roth contributions; and/or
  - Conversion of conventional balance to Roth account. Taxable in year of conversion.
- No Legislation required.

LEOFF Plan 2 Retirement Board

Option 1

Authorize LEOFF Plan 2 to annuitize roll-overs of tax deferred savings. Additional information:

- Permissible rollovers can come from any tax deferred savings plan (457, 403(b), 401(a)).
- There is no IRS limit on the amount annuitized other than overall sec. 415 limits.

Option 3

Require LEOFF Employers to Offer DRS's Deferred Compensation Program to LEOFF Members.

- Board directed staff to move forward.
- Draft legislation being reviewed by DRS.
- DRS Director asked SCPP to consider similar legislation.

Option 4

Implementation of new option authorizing Roth contributions and/or conversions within DRS's 457 plan:

- Option 4(a): Direct staff to draft legislation requiring Roth option;
- Option 4(b): Ask DRS to exercise its authority to develop Roth option;
- Option 4(c): Take no action at this time.

Any Questions?

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November 20, 2013

PROMOTING INDIVIDUAL SAVINGS FOR RETIREMENT

COMPREHENSIVE REPORT FOLLOW-UP

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ISSUE

Members are not able to take advantage of a recent IRS ruling which provides new options for managing savings in retirement.

MEMBERS IMPACTED

New options encouraging member's retirement savings as part of LEOFF Plan 2 would be available to all 16,720 active LEOFF Plan 2 members[1].

OVERVIEW

The Board initially considered this issue at the August 28, 2013 board meeting. At the September follow-up the Board looked at three options and requested additional information on: Annuitization of additional amounts rolled over into LEOFF plan 2; and requiring LEOFF employers to participate in DRS's 457 plan. Staff also researched authorized "Roth" accumulations in governmental 457 plans.

The LEOFF Plan 2 defined benefit Plan, the first leg of the three-legged retirement stool, provides a defined lifetime payout that does not vary with investment return. Retirees must devise their own distribution strategy for the second leg of the stool, individual retirement savings. Members can reduce the risk of outliving their assets if they convert at least some of those assets into a lifetime annuity.

LEOFF Plan 2 members may purchase an additional monthly benefit through the LEOFF Plan 2 trust fund by buying up to 5 years of additional service credit at the time retirement. Under current law, only Plan 3 members (TRS, PERS & SERS[2]) can convert contributions to an annuity from their retirement system.

Leveraging the existing LEOFF Plan 2 infrastructure to authorize accumulation of savings and/or converting that account to a monthly benefit through the LEOFF Plan 2 trust fund would

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[1] Membership number as of June 30, 2012; Office of the State Actuary 2011 LEOFF Plan 2 Valuation Report.

[2] Teachers' Retirement System (TRS); Public Employees' Retirement System (PERS); School Employees' Retirement System (SERS).

provide a cost-effective mechanism to encourage retirement savings. This can be particularly important for LEOFF Plan 2 members since many do not participate in social security through their employer.

This report examines federal laws encouraging retirement savings, the costs of savings for retirement, different mechanisms for annuitizing retirement savings, a recent IRS ruling authorizing annuitizing retirement savings through LEOFF Plan 2, and provides options for further action.

BACKGROUND INFORMATION & POLICY ISSUES

The LEOFF Plan 2 Retirement Board began studying ways to encourage increased retirement savings during the 2004 Interim. The Board recommended legislation allowing purchase of up to five years of service credit at retirement. The Legislature passed that recommendation in 2005 (HB 1269).

That same year the Department of Retirement Systems (DRS) began offering the annuities through the Plan 3 programs. The Purchase of Annuity topic was studied by the Board during the 2006, 2007, 2008 and 2009 Interims reaching the Final Proposal stage in 2006, 2008 and 2009, but no legislation was recommended. The topic was deferred for joint consideration with the Select Committee on Pension Policy (SCPP) for the 2009 Interim. No further action was taken.

> *The paradox is that investors recognize that their retirement savings will need to last longer than ever before but they aren't making plans to ensure they will actually have the money they need. There tends to be a false sense of security when it comes to Planning for retirement. We hope that the money will somehow be there when we need it but we're not taking the action required to ensure it is. This is a serious problem, and addressing it must become an urgent priority.*
>
> Noel Archard, Head of BlackRock Canada. July 2013

SAVING FOR RETIREMENT

Federal Law Encouraging Retirement Savings

The federal tax code encourages individuals to save for, and invest in, retirement:

- Qualified deferred compensation plans, such as the IRS §457 plan offered through the Department of Retirement Systems (DRS) deferred compensation program, permit an individual to authorize pre-tax salary deductions for deposit into a personal investment account. Many LEOFF Plan 2 employers offer these types of plans to employees. Upon separation from employment a member may leave the funds invested or select a distribution option.

- Members may transfer funds between government defined benefit pension Plans like LEOFF Plan 2 and deferred compensation accounts such as 457, 403(b), and 401(k) Plans. This helps members manage retirement savings as they change employers.

- Purchase of up to five years of service credit or “air-time” was authorized in the Federal Pension Protection Act.

- A recent IRS revenue ruling[3] allows members with funds in a deferred compensation account maintained by an employer to roll the funds over into their defined benefit plan and convert those funds to an annuity from the defined benefit Plan.

- The Small Business Jobs act of 2010 authorized governmental 457 plans to include a Roth option.

Using these federal provisions, some state and local government pension plans allow member fund transfers, including funds from tax-deferred accounts, into the primary defined benefit plans to purchase additional service credit or an annuity.

THE COST OF SAVING - DEFERRED COMPENSATION FEES

DRS operates a deferred compensation program under 26 U.S.C. §457, commonly called a "457 Plan". Washington’s political subdivisions may participate in DRS’s 457 Plan, or use another administrator, such as ICMA-RC. Administrative fees vary significantly. Comparing private administrator fees to DRS’s annual .13% fee can be challenging since private administrators tend to use variable fee schedules rather than the flat fee charged by DRS, as demonstrated by the fee comparison table included as Appendix A.

The average net annual fee of the private 457 plan administrators examined in Appendix A is 1.29%, nearly 10 times the .13% charged by DRS. DRS’s lower fees facilitate a larger accumulation from the same member contributions[4]:

[3] Internal Revenue Bulletin 2012-8; issued February 21, 2012.

[4] The comparison assumes $3,602 per year contribution for 15 years, earning interest at LEOFF PLAN 2’s assumed rate of 7.5%, less annual fees.

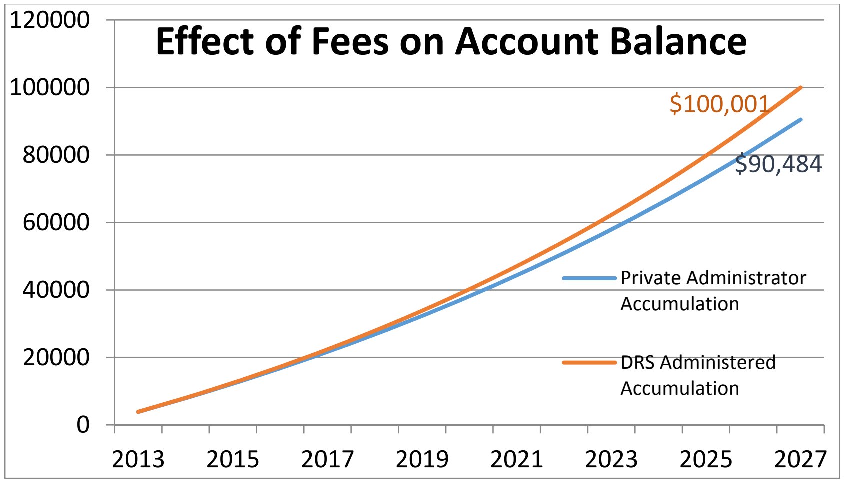

Figure 1

ANNUITIZING ASSETS

Annuities can convert retirement savings into a guaranteed monthly income (this process is called annuitization) for a specified period of time. A life annuity provides that income for the member's lifespan in exchange for a lump-sum dollar amount paid up front. Deferred compensation plans do not normally allow for the distribution of assets in the form of an annuity directly from the fund. LEOFF Plan 2 members wishing to annuitize their retirement savings must purchase the annuity through an insurance company.

The price/value of the annuity depends in part upon the features selected by the purchaser. The terms and conditions of an annuity contract specify features such as whether the annuity will be for a single life or a joint annuity (like a survivor benefit feature), the payment frequency, adjustments for cost of living, and death provisions. Different methods for annuitizing assets are listed below, though not all are currently available to LEOFF Plan 2 members.

Trust Fund Annuity Purchase

TRS Plan 3, SERS Plan 3, and PERS Plan 3 members and survivors may convert some or all of the funds from their Plan 3 member account to a life annuity, RCW 41.50.088. The features and options of the Plan 3 annuities administered by DRS are detailed in Appendix B. This option is not available to LEOFF Plan 2 members.

DRS calculates the annuity that can be purchased for a given lump sum using an age based actuarial table to compute the monthly benefit per $1.00 of accumulation for defined benefits. There is no limit on the amount of funds in the member account that can be converted to an annuity.

RCW 41.32.067 also allows TRS Plan 1, 2 and 3 members to purchase additional benefits through a member reserve contribution which is actuarially converted to a monthly benefit at the time of retirement. The statute was passed to provide teachers with out-of-state service credit a mechanism for transferring contributions from a prior system into TRS[5].

Service Credit Purchase

LEOFF Plan 2 members can annuitize retirement savings by purchasing up to five years of additional service credit at the time of retirement. To purchase service credit under this option the member pays the actuarial present value of the resulting increase in the member's benefit. A member may pay all or part of the cost of the additional service credit with an eligible transfer from a qualified retirement plan. For more information on the history and methodology for calculating service credit purchases, see Appendix C.

The federal 5-year "air time" limit works out to a maximum of $86,484 that could be converted to a monthly benefit by the average LEOFF Plan 2 member[6], see Appendix C. This is a key difference between a Plan 3 annuity conversion and a service credit purchase: the Plan 3 conversion does not have a maximum amount limit.

Commercial Market Annuity

Retirement savings can be annuitized by purchasing an annuity policy through insurance agents, financial planners, banks and life insurance carriers. However, only life insurance companies issue policies. Generally, commercial market annuities do not offer all the same features as the Plan 3 trust fund annuity and do not provide as favorable a payout. A primary reason for the payout difference is the different interest rate used to calculate the value of the annuity. Private insurers use a lower interest rate, due in part to the inclusion of a reasonable profit:

> [A] private insurer will provide the annuity based on an interest rate of about 4 percent, whereas DRS will provide the annuity based on an interest rate of about 8%.[7].

The interest rate differential drives a significant difference in payout amounts between private annuity contracts and contributions annuitized through the trust fund. Five different insurance companies quoted the monthly annuity with a 3% annual COLA they would provide the average LEOFF Plan 2 retiree[6] for $100,000:

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5 *See* Laws of 1991 c 278 § 2.]

6 Age 56 with 17 years of service credit and a final average salary of $5000 per month.

7 2010 State Actuary 2010 fiscal note on the Board's purchase of annuity proposal.

Insurance Company	Quote
American General	$389
Aviva	$402
Fidelity & Guaranty Life	$421
Genworth Life Insurance	$406
Integrity Life Insurance	$400
Average	**$404**

If that same average LEOFF Plan 2 member were able to leverage the institutional advantages of the retirement system by annuitizing $100,000 within the LEOFF Plan 2 system, the payout would be $578.14[8]. That's a 43% increase over the average commercial quote, or $174 more per month for life.

The chart below uses the 15 year accumulations calculated in figure 1 and estimates the annuity those accumulations would purchase from either an insurance company or the LEOFF Plan 2 trust fund.

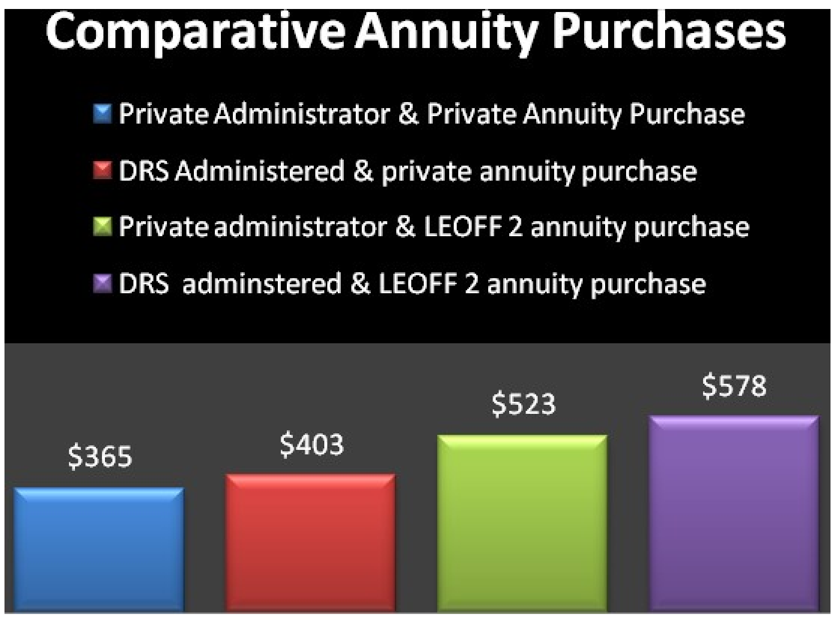

Figure 2

Current state law does not allow annuitization of retirement savings through the LEOFF Plan 2 trust fund. A recent IRS ruling gives the green light to such a program.

8 $100,000 x .0057814 (conversion factor from DRS table for 56 year-old LEOFF member) = $578.14 monthly life annuity

NEWLY AVAILABLE ALTERNATIVES:

Annuitization through 401(a) plan

Federal tax law allows public defined benefit plans to add a member savings account within the plan, sometimes referred to as a companion account or "sidecar". Contributions to the employee savings account may be made by the employer or the employee and may be either pre-tax or after tax depending on plan design.

Under the recent IRS ruling cited above, a retirement savings account can be annuitized within the 401(a) defined benefit plan to obtain an additional monthly benefit paid through the trust fund. This can be done either through a employee savings account administered within the 401(a) plan or by rolling over retirement savings from another plan such as a 457 plan.

A "sidecar" plan administered through LEOFF Plan 2 could leverage the institutional advantages available to active members as participants in an existing state-administered Plan. Those advantages include the lower fees charged by DRS to administer the savings plan, and the more favorable annuity payout when purchased through the existing LEOFF Plan 2 trust fund.

Potential Risks

The purchase of an annuity through the LEOFF Plan 2 trust fund would not have a cost to the system[9] under current actuarial assumptions. There is, however, a potential risk to the fund if those assumptions change or actual experience falls below assumed levels. When an annuity is purchased, the member locks in the actuarial assumptions in place at that time. A subsequent change in assumptions may knock the annuity out of actuarial equivalency.

For instance, the Actuary's 2010 fiscal note assumed a trust fund annuity would be calculated using the fund's 8% interest assumption. The Board has since reduced that assumption to 7.5%. An annuity locked in with an 8% interest assumption would be "too high" under a 7.5% assumption, causing a $12,980 actuarial loss to the fund[9].

Roth Contributions

The original 457 plan design allows employees deduct contributions from their salary pre-tax. The amounts are taxed at the time of distribution. A Roth[10] plan reverses that system by taxing contributions, but then disbursing contributions and earnings tax free after retirement.

Governmental 457 plans were not originally allowed to offer a Roth option. The Small Business Jobs Act of 2010 authorizes government sponsored 457 plans to offer designated Roth accounts. Federal law now allows governmental 457 plans to permit participants to:

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[9] *See* OSA fiscal note on 2010 annuity purchase proposal, Appendix C.

[10] Named after Senator William Roth of Delaware, the chief legislative sponsor of the original legislation in the Taxpayer Relief Act of 1997 (Public Law 105-34).

- Designate a Roth elective deferral account within the plan; and/or
- Convert conventional pre-tax contributions into Roth contributions within the same plan. Participants wishing to convert existing contributions would have to pay taxes on amounts converted at the time of conversion.

Participants in DRS's 457(b) plans cannot take advantage of in-plan conversions/rollovers to designated Roth accounts unless DRS formally adopts those options in their plan document. DRS has the authority to do this under current law, though they are not required to.

POLICY OPTIONS

The specifics of options available to the Board are in many ways a function of federal tax laws. DRS has received some guidance from the law firm of Ice Miller as of this writing. The LEOFF Plan 2 Board staff had additional questions which are still pending at this time. The options presented below, while accurate in broad strokes, may have to be modified in subsequent presentations depending on future tax law guidance. Additionally, option 1 could be combined with either option 2 or option 3.

Option 1: Propose Legislation authorizing LEOFF Plan 2 to accept roll-overs of tax deferred savings and annuitize those amounts through the plan upon retirement.

Under this option the Board would direct staff to develop legislation authorizing DRS to accept roll-overs from LEOFF Plan 2 members for annuitization at the time of retirement. Further guidance is required to determine what types of roll-overs are allowable under federal tax laws and what limitations, if any, there are on annuitization of rolled over amounts.

Option 2: Propose Legislation establishing a 410(a) savings plan within LEOFF 2 to accept contributions from LEOFF Plan 2 members.

Under this option the Board would direct staff to develop legislation establishing a "sidecar" savings plan within LEOFF Plan 2 that could accept member contributions for distribution following retirement. Preliminary research indicates that this vehicle would be less flexible that a 457 plan such as that administered by DRS's Deferred Compensation Program. Member contributions may be required to follow the same rules as Plan 3 contributions. A member could be required to select a rate upon enrollment. Like the Plan 3 contribution rates, once selected the rate could not be changed except upon change of employment. Voluntary member contributions, which could apparently fluctuate, would be after-tax.

Option 3: Require LEOFF Employers to Offer DRS's Deferred Compensation Program to LEOFF Members.

This option provides a more flexible plan than the 401(a) option. The Board would propose legislation requiring all LEOFF Plan 2 employers to offer the state administered 457 plan. This would ensure that LEOFF Plan 2 members can avail themselves of a plan with the lowest possible administrative fees.

SUPPLEMENTAL POLICY OPTION INFORMATION

The Board requested additional consideration of options 1 and 3. A fourth option has been developed based on the additional information about Roth plans.

Option 1*:*

Staff has confirmed that the IRS will permit rollovers from any authorized tax-deferred savings plan (457, 403(b), 401(a)) into LEOFF 2 for purposes of purchasing an annuity. Further, there are no IRS limits on the amount that may be rolled over and annuitized, except that the total payout cannot exceed the IRS's section 415 limits on maximum allowable benefit.

Option 3:

Staff has drafted proposed legislation that is currently being reviewed by DRS for comments. DRS Director Marcy Frost has asked the Select Committee on Pension Policy to consider a similar directive for all Washington Public Employers.

Option 4: Roth Contributions to Governmental 457 plan.

The Board may wish to take action on the Roth option:

> **Option 4(a): Amend Deferred Compensation Statute to Require Roth Option.**
> Submit legislation requiring DRS to develop a Roth option as part of its deferred compensation plan. The Board may want to direct staff to work with DRS on bill language.
>
> **Option 4(b): Ask DRS to Offer a Roth Option**
> If the Board wished DRS to develop a Roth option without a bill, it may be sufficient to send a letter from the Board to DRS requesting them to take action.
>
> **Option 4(c): Take No Action at this Time**
> The Board could decline to take any action on the Roth option at this time.

SUPPORTING INFORMATION

Appendix A: Deferred Compensation Fee Comparison

Appendix B: Plan 3 annuity purchase option features

Appendix C: Service Credit Purchase history and example

Appendix D: OSA draft fiscal note

Appendix A

DEFERRED COMPENSATION FEE ANALYSIS

An approximation of annual fees for private administration of a 457 deferred compensation plan was derived by working from a table developed by The City of Duluth in 2013 to allow employees to compare costs of 4 different 457 Plan administrator. Fees were highly variable. Board staff averaged the fees of each provider and then averaged those to derive a net average estimated annual fee. Given the small sample and the assumptions that had to be made in averaging, this is a "ball park" figure provided solely for purposes of comparison.

	Hartford Life Deferred Compensation Plan		ICMA Retirement Corporation Deferred Compensation Plan		Minnesota State Deferred Compensation Plan MNDCP – (Great West)		NationwideDeferred Compensation Program	
	Original data	**Average fee**	**Original data**	**Average fee**	**Original data**	**Average fee**	**Original data**	**Average fee**
Annual Account Fees	No	0 %	No.	0%	No	0%	No.	0%
Daily Asset-Based Charges	75 - 90 bps	.825 %	0.55% administration fees on all assets; additional 0.15% fee on assets in non-proprietary funds.	.55%	0.10% annual administrative fee, charged only on the first $100,000 in an individual account.	.1%	0.50% annual administrative fee on all variable fund assets. 0.25% annual administrative fee on fixed account option.	.375%
Fund Operating Expenses	Varies by investment option, from 0.0% to 2.42%	1.21%	Fund expenses range from 0.46% to 1.40%	.93%	Fund expenses range from 0.01% to 0.93%.	.47%	Fund expenses range from 0.00% to 1.40%.	.7%
Net fee estimate	**2.035%**		**1.48%**		**.57%**		**1.075%**	
Average for all plans	**1.29%**							

APPENDIX B
CURRENT ANNUITY PURCHASE FEATURES

The purchase of annuity currently administered by DRS through the Plan 3 programs includes the following features:

WSIB Investment Program Annuity Features and Options	
Contract Provider	Washington State
Minimum Purchase Price	$25,000
Annuity Payment Frequency	Monthly
Rescission Period	15 calendar days from date of purchase
Single Life Annuity	• Provides regular payment for as long as annuitant lives. • Automatic 3% Annual Cost of Living Adjustment (COLA) • Conversion option to Joint Life Annuity • Balance Refund
Joint Life Annuity	• Provides regular payment for as long as member or joint annuitant is alive. • Joint annuitant survivorship options: 100%, 66 2/3%, or 50% • Automatic 3% Annual COLA • Monthly payment pops-up to Single Life Annuity amount if joint annuitant predeceases member. • Balance Refund

Annuitant – The member/owner who purchases the annuity; the payee who receives lifetime monthly payments.

Balance Refund – Any remaining balance equal to the original purchase price minus the total of all annuity payments made to the single or joint annuitants, may be refunded to the specified beneficiary.

Conversion Option – If a single life annuity is purchased and then a subsequent marriage occurs, a one-time opportunity is available to convert to a joint life annuity with the new spouse as the joint annuitant. If a joint annuity is purchased with someone other than a spouse named as the joint annuitant, the annuity may be converted to a single life annuity after payments have begun.

Joint Annuitant – The person designated to receive an ongoing payment in the event of the annuitant's death.

Pop-up – An increase from a joint annuity payment amount to the full single life annuity amount if the annuitant outlives the joint annuitant.

Rescission Period – A period of time (typically 7 to 15 days) during which the terms of the contract may be canceled or altered

APPENDIX C
SERVICE CREDIT PURCHASE

Since the inception of the service credit purchase of "air time" benefit (2005), 214 service credit purchase billings have been requested from DRS and paid in full. The average cost of all billings was $118,876.

LEOFF Plan 2 SC Purchases at Time of Retirement

Year Paid	2006	2007	2008	2009	2010	2011	2012	2013	Grand Total
Number of PSC Bills Paid	6	10	11	15	30	42	57	43	214
Average Cost of PSC Bill	$106,853	$102,102	$85,391	$99,161	$119,527	$123,924	$120,245	$132,699	$118,876
Average SC Months of PSC Bill	55	53	44	48.5	54.6	51.8	48.4	54.3	51.3

APPENDIX D

OSA FISCAL NOTE OF 2010 ANNUITY PURCHASE PROPOSAL

DRAFT
ACTUARY'S FISCAL NOTE

RESPONDING AGENCY:	CODE:	DATE:	PROPOSAL [NAME or Z-NUMBER]:
Office of the State Actuary	**035**	**12/07/09**	**LEOFF 2 Annuity Purchase**

WHAT THE READER SHOULD KNOW

The Office of the State Actuary ("we") prepared this draft fiscal note based on our understanding of the proposal as of the date shown above. We intend this draft fiscal note to be used by the Law Enforcement Officers' and Fire Fighters' Retirement System (LEOFF) Plan 2 Board throughout the 2009 Interim only. If a legislator introduces this proposal as a bill during the next Legislative Session, we will prepare a final fiscal note based on that bill language. The actuarial results shown in this draft fiscal note may change when we prepare our final version for the Legislature.

We advise readers of this draft fiscal note to seek professional guidance as to its content and interpretation, and not to rely upon this communication without such guidance. Please read the analysis shown in this draft fiscal note as a whole. Distribution of, or reliance on, only parts of this draft fiscal note could result in its misuse, and may mislead others.

SUMMARY OF RESULTS

This proposal would authorize the Department of Retirement Systems (DRS) to provide optional actuarially equivalent annuity purchases from the Law Enforcement Officers' and Fire Fighters' (LEOFF) Plan 2 retirement fund to LEOFF Plan 2 members and survivors.

This proposal does not impact the expected actuarial funding of the system. Please see the body of this draft fiscal note for a detailed explanation.

WHAT IS THE PROPOSED CHANGE?

Summary Of Change

This proposal impacts the LEOFF Plan 2 by authorizing DRS to provide optional actuarially equivalent annuity purchases from the LEOFF Plan 2 retirement fund to LEOFF Plan 2 members and survivors. The proposal allows members to purchase annuities prior to retirement. DRS would develop the life annuity benefit schedules no later than December 31, 2010.

Assumed Effective Date: 90 days after session.

What Is The Current Situation?

Plan 3 members may purchase a similar annuity with contributions invested in the Total Allocation Portfolio of the Washington State Investment Board (WSIB) investment program, but only at the time of retirement. LEOFF Plan 2 members may purchase up to five years of additional service by paying the full actuarial value of the service at the time of retirement.

Who Is Impacted And How?

We estimate this proposal could affect all 16,626 active members of LEOFF Plan 2 with the option of improved benefits.

We estimate this proposal will increase the benefits for a typical member by providing the option to annuitize their retirement savings. Annuitizing their money provides a member security against outliving their assets. In addition, the annuity offered to them through DRS will cost far less than an annuity bought from a private insurer. A private insurer calculates annuities based on a lower interest rate to account for risk and profit.

For example, a private insurer will provide the annuity based on an interest rate of about 4 percent, whereas DRS will provide the annuity based on an interest rate of about 8 percent. For a member age 55 buying a $10,000 life annuity, this would mean they would pay a private company about $165,000, whereas they would pay DRS about $110,000.

WHY THIS PROPOSAL DOES NOT HAVE A COST

Why This Proposal Does Not Have A Cost

This proposal does not have an expected cost because the member is paying the full actuarial value.

Who Will Pay For These Costs/Savings If They Arise?

The member will pay the actuarially equivalent value of the annuity.

However, as the experience of the system emerges, if the payment is more or less than the actual value of the annuity, then LEOFF Plan 2 contribution rates will increase or decrease accordingly.

HOW WE VALUED THESE COSTS

Assumptions We Made

We assumed that the payments made by the members will equal the full actuarial value of the annuity. We would need to make several assumptions to determine the purchase price of the annuity:

- Expected rate of investment return.
- Expected rate of mortality for the annuitant.
- The annuity start date – the member's retirement date (if purchased prior to retirement).

As with any actuarial calculation that involves estimating future events, actual experience may differ from the underlying assumptions made. When actual experience differs from what we assumed would occur, the system experiences an actuarial gain or loss. An actuarial gain would decrease plan liabilities (or increase assets); whereas, an actuarial loss would increase plan liabilities (or decrease assets). Therefore, we cannot say with certainty that this proposal will not impact plan liabilities in the future.

If the members who purchase annuities, on average, live shorter/longer than assumed, the system will experience actuarial gains/losses in the future. If the actual rate of investment return is more/less than the assumed rate, the system will experience actuarial gains/losses from this assumption as well. For these two assumptions, we will not know whether a gain or loss has occurred until DRS has made all payments under the annuity contract.

The assumed annuity start date, or member's retirement date, will also produce a source of actuarial gain or loss for members who purchase annuities prior to their retirement date. For this particular assumption, we can determine whether an actuarial gain or loss has occurred at the time of retirement. DRS may have the option to adjust the purchase price or adjust the annuity amount (a "true up") at the time of retirement to eliminate this source of gain/loss. Without such an adjustment, the potential for significant actuarial gain/loss, on an individual member basis, exists for this particular assumption.

Otherwise, we developed these costs using the same assumptions as disclosed in the 2008 Actuarial Valuation Report.

HOW THE RESULTS CHANGE WHEN THE ASSUMPTIONS CHANGE

To determine the sensitivity of the actuarial results to the best-estimate assumptions selected for this pricing we varied the following assumptions:

- **Mortality rate** – We determined the cost to the system if the annuity amount was calculated based on higher mortality rates than what actually occurs over time (people lived longer than assumed). For this sensitivity we used 100 percent of scale AA mortality improvement rather than the assumed 50 percent.
- **Investment returns** – We determined the cost to the system if the annuity amount was calculated based on a higher investment ~~returns~~ than what actually occurs over time (investments pay less than assumed). For this sensitivity we used a 7.5 percent investment return rather than the assumed 8 percent.
- **Annuity start date** – We determined the cost to the system if the annuity amount was calculated based on a later retirement date than what actually occurs over time (people start collecting the annuity earlier than assumed). For this sensitivity we used a start age of 53 rather than an assumed age of 55.
- **All of the above** – We determined the cost to the system if all three of the assumptions are incorrect, as described above, at the same time.

The table below shows the expected results versus the four sensitivity runs outlined above. The example outlines the impact due to one member currently age 40 who purchases an annuity with $100,000. When all three occur at once, the liability is larger than the sum of each of the three individually because of the interaction of these assumptions.

Sensitivity Example – 40-Year- Old Male Purchases Retirement Annuity With $100,000			
Scenario	Cash Paid From Member To Plan	Present Value of Plan Annuity	Cost to the System
1) Expected	$100,000	$100,000	$0
2) Lower Mortality Than Expected	$100,000	$102,549	$2,549
3) Lower Asset Returns Than Expected	$100,000	$112,980	$12,980
4) Earlier Retirement Age Than Expected	$100,000	$120,794	$20,794
5) Scenarios 2, 3, and 4	$100,000	$138,777	$38,777

Assumes annuity calculation based on 3% COLA, and 90%/10% male/female mortality blend.

ACTUARY'S CERTIFICATION

The undersigned hereby certifies that:

1. The actuarial cost methods are appropriate for the purposes of this pricing exercise.
2. The actuarial assumptions used are appropriate for the purposes of this pricing exercise.
3. The data on which this draft fiscal note is based are sufficient and reliable for the purposes of this pricing exercise.
4. Use of another set of methods and assumptions may also be reasonable, and might produce different results.
5. This draft fiscal note has been prepared for the Law Enforcement Officers' and Fire Fighters' Retirement System Plan 2 Board.
6. This draft fiscal note has been prepared, and opinions given, in accordance with Washington State law and accepted actuarial standards of practice as of the date shown on page one of this draft fiscal note.

This draft fiscal note is a preliminary actuarial communication and the results shown may change. While this draft fiscal note is meant to be complete, the undersigned is available to provide extra advice and explanations as needed.

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

GLOSSARY OF ACTUARIAL TERMS

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 that has been earned (or accrued) as of the valuation date.

Actuarial Present Value: The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of actuarial assumptions (i.e. interest rate, rate of salary increases, mortality, etc.).

Aggregate Funding Method: The Aggregate Funding Method is a standard actuarial funding method. The annual cost of benefits under the Aggregate Method is equal to the normal cost. The method does not produce an unfunded liability. The normal cost is determined for the entire group rather than on an individual basis.

Entry Age Normal Cost Method (EANC): The EANC method is a standard actuarial funding method. The annual cost of benefits under EANC is comprised of two components:

- Normal cost.
- Amortization of the unfunded 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.

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.

Projected Unit Credit (PUC) Liability: The portion of the Actuarial Present Value of future benefits attributable to service credit that has been earned to date (past service).

Projected Benefits: Pension benefit amounts which are expected to be paid in the future taking into account such items as the effect of advancement in age as well as past and anticipated future compensation and service credits.

Unfunded PUC Liability: The excess, if any, of the Present Value of Benefits calculated under the PUC cost method over the Valuation Assets. This is the portion of all benefits earned to date that are not covered by plan assets.

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 are not covered by plan assets.