DRAFT

ACTUARY'S FISCAL NOTE

RESPONDING AGENCY:	CODE:	DATE:	PROPOSAL [NAME or Z-NUMBER]:
Office of the State Actuary	**035**	**12/03/2010**	**$214,000 Lump Sum Duty-Death Benefit**

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 Select Committee on Pension Policy during the 2010 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 increases the amount of the lump sum duty-death benefit provided for public employees and volunteer fire fighters to $214,000.

Impact on Pension Liability			
(Dollars in Millions)	**Current**	**Increase**	**Total**
Today's Value of All Future Pensions	$61,952	$2.7	$61,954
Earned Pensions Not Covered by Today's Assets	$6,884	$0.1	$6,884

Impact on Contribution Rates: (Effective 9/1/2011)				
2011-2013 State Budget	**PERS**	**TRS**	**SERS**	**PSERS**
Employee (Plan 2)	0.00%	0.00%	0.00%	0.00%
Employer:				
Current Annual Cost	0.00%	0.00%	0.00%	0.00%
Plan 1 Past Cost	0.00%	0.00%	0.00%	0.00%
Total	0.00%	0.00%	0.00%	0.00%

Budget Impacts			
(Dollars in Millions)	**2011-2013**	**2013-2015**	**25-Year**
General Fund-State	$0.0	$0.2	$4.2
Total Employer	$0.0	$0.6	$13.3

See the actuarial results section of this draft fiscal note for additional detail.

WHAT IS THE PROPOSED CHANGE?

Summary Of Benefit Improvement

This proposal impacts the following retirement systems:

- Public Employees' Retirement System (PERS).
- Teachers' Retirement System (TRS).
- School Employees' Retirement System (SERS).
- Public Safety Employees' Retirement System (PSERS).
- Volunteer Fire Fighters' Relief and Pension Fund (VFFRPF).

This proposal increases the amount of the lump sum duty-death benefit from $150,000* to $214,000.

The lump sum duty-death benefit is also provided as a sundry claim to the state general fund for members of the Judicial Retirement System (JRS), and to state, school district, and higher education employees who aren't members of a state retirement system.

**$152,000 in VFFRPF.*

Effective Date: 90 days after session.

What Is The Current Situation?

Survivors of public employees who die as a result of injuries sustained or illnesses contracted in the course of employment are eligible to receive a lump sum duty-death benefit. The amount of this benefit is $150,000 for members of PERS, TRS, SERS, and PSERS. VFFRPF members receive a $152,000 duty death benefit. The amount is provided as a sundry claim to the state general fund for members of the Judicial Retirement System, and to state, school district, and higher education employees who aren't members of a state retirement system. The benefit amount does not adjust annually for inflation.

In addition to the duty-death benefit, VFFRPF beneficiaries also receive an additional $2,000 funeral benefit.

Who Is Impacted And How?

We estimate this proposal could affect all 296,863 active members of the systems listed above through improved benefits. In the future, we expect this benefit to be paid to about one member out of 40,800 members per year over the long-term.

This proposal will increase the lump sum death benefit by $64,000* for any member that dies as a result of a duty-related injury or illness.

**$62,000 in VFFRPF.*

WHY THIS PROPOSAL HAS A COST AND WHO PAYS FOR IT

Why This Proposal Has A Cost

This proposal increases the amount of the lump sum death benefit by $64,000.* This increases the present value of future benefits of the affected systems. This proposal will not result in more lump sum death benefits being paid, but when the benefits are paid, the amount will be larger.

**$62,000 in VFFRPF.*

Who Will Pay For These Costs?

Each system will subsidize the increase in liability that results from this proposal under their normal cost-sharing formulas:

- Plan 1: 100 percent employer.
- Plan 2: 50 percent member and 50 percent employer.
- Plan 3: 100 percent employer.

HOW WE VALUED THESE COSTS

Assumptions We Made And How We Applied Them

We changed the lump sum duty-death benefit to provide a $214,000 benefit in place of the current $150,000* benefit. We assumed no members of JRS will die from duty-related illness or injury and have excluded these members from this pricing.

We assumed that two-thirds of all future entrants into PERS, TRS, and SERS will choose to join Plan 2 and the remaining one-third will enter Plan 3.

Otherwise, we developed these costs using the same assumptions and methods as disclosed in the June 30, 2009, Actuarial Valuation Report (AVR).

We used the Entry Age Normal Actuarial Funding Method to determine the fiscal budget changes for future new entrants. We used the Aggregate Actuarial Funding Method to determine the fiscal budget changes for current plan members.

**$152,000 in VFFRPF.*

Special Data Needed

We developed these costs using the same assets and data as disclosed in the AVR.

ACTUARIAL RESULTS

How The Liabilities Changed

This proposal will impact the actuarial funding of the plans by increasing the present value of future benefits payable under the plans as shown in the following table.

Impact on Pension Liability			
(Dollars in Millions)	**Current**	**Increase**	**Total**
Actuarial Present Value of Projected Benefits			
(The Value of the Total Commitment to all Current Members)			
PERS 1	$14,215	$0.1	$14,215
PERS 2/3	24,472	1.7	24,474
PERS Total	**$38,687**	**$1.8**	**$38,689**
TRS 1	$10,956	$0.0	$10,956
TRS 2/3	8,661	0.3	8,662
TRS Total	**$19,617**	**$0.3**	**$19,617**
SERS 2/3	**$3,260**	**$0.6**	**$3,260**
PSERS 2	**$388**	**$0.1**	**$388**
Unfunded Actuarial Accrued Liability			
*(The Portion of the Plan 1 Liability that is Amortized According to Funding Policy)**			
PERS 1	**$4,208**	**$0.1**	**$4,208**
TRS 1	**$2,676**	**$0.0**	**$2,676**
Unfunded PUC Liability			
(The Value of the Total Commitment to all Current Members Attributable to Past Service that is Not Covered by Current Assets)			
PERS 1	$4,169	$0.1	$4,169
PERS 2/3	(2,560)	1.7	(2,558)
PERS Total	**$1,609**	**$1.8**	**$1,611**
TRS 1	$2,692	$0.0	$2,692
TRS 2/3	(947)	0.3	(946)
TRS Total	**$1,745**	**$0.3**	**$1,745**
SERS 2/3	**($341)**	**$0.6**	**($340)**
PSERS 2	**($15)**	**$0.1**	**($15)**

Note: Totals may not agree due to rounding.
** PERS 1 and TRS 1 are amortized over a ten-year period.*

In addition, this proposal increases the relief liability of VFFRPF by $297,097. Currently the Board for VFFRPF pays for all relief costs as they come due (no prefunding).

We did not value the impact of this proposal on the following members since we do not currently value them in any of our actuarial valuations:

- 2,659 Volunteer Fire Fighters that are not members of the pension plan.
- Members of Higher Education Retirement Plans.
- State, school district, and higher education employees who aren’t members of the Washington State Retirement Systems.

How The Present Value of Future Salaries (PVFS) Changed

This proposal does not change the PVFS of the members of PERS, TRS, SERS, and PSERS so there is no impact on the actuarial funding of these plans due to the PVFS.

How Contribution Rates Changed

The increase in the required actuarial contribution rate does not round up to the minimum supplemental contribution rate of 0.01 percent, therefore the proposal will not affect contribution rates in the current biennium. However, we will use the un-rounded rate increases in the following table to measure the budget changes in future biennia.

Impact on Contribution Rates: (Effective 9/1/2011)				
System/Plan	**PERS**	**TRS**	**SERS**	**PSERS**
Current Members				
Employee (Plan 2)	0.001%	0.001%	0.003%	0.001%
Employer:				
Normal Cost	0.001%	0.001%	0.003%	0.001%
Plan 1 UAAL	0.000%	0.000%	0.000%	0.000%
Total	0.001%	0.001%	0.003%	0.001%
New Entrants*				
Employee (Plan 2)	0.002%	0.001%	0.005%	0.002%
Employer:				
Normal Cost	0.002%	0.001%	0.005%	0.002%
Plan 1 UAAL	0.000%	0.000%	0.000%	0.000%
Total	0.002%	0.001%	0.005%	0.002%

**Rate change applied to future new entrant payroll and used to determine budget impacts only. Current members and new entrants pay the same contribution rate.*

How This Impacts Budgets And Employees

Budget Impacts					
(Dollars in Millions)	**PERS**	**TRS**	**SERS**	**PSERS**	**Total**
2011-2013					
General Fund	$0.0	$0.0	$0.0	$0.0	$0.0
Non-General Fund	0.0	0.0	0.0	0.0	0.0
Total State	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Local Government	0.0	0.0	0.0	0.0	0.0
Total Employer	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Total Employee	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
2013-2015					
General Fund	$0.1	$0.0	$0.1	$0.0	$0.2
Non-General Fund	0.1	0.0	0.0	0.0	0.1
Total State	**$0.2**	**$0.0**	**$0.1**	**$0.0**	**$0.3**
Local Government	0.2	0.0	0.1	0.0	0.3
Total Employer	**$0.3**	**$0.1**	**$0.1**	**$0.0**	**$0.6**
Total Employee	**$0.3**	**$0.0**	**$0.1**	**$0.0**	**$0.3**
2011-2036					
General Fund	$1.7	$1.0	$1.4	$0.1	$4.2
Non-General Fund	2.5	0.0	0.0	0.0	2.5
Total State	**$4.2**	**$1.0**	**$1.4**	**$0.1**	**$6.6**
Local Government	4.5	0.5	1.7	0.0	6.7
Total Employer	**$8.6**	**$1.5**	**$3.0**	**$0.2**	**$13.3**
Total Employee	**$5.9**	**$0.7**	**$1.8**	**$0.2**	**$8.7**

Note: Totals may not agree due to rounding.

The analysis of this proposal does not consider any other proposed changes to the systems. The combined effect of several changes to the systems could exceed the sum of each proposed change considered individually.

As with the costs developed in the actuarial valuation, the emerging costs of the systems will vary from those presented in the AVR or this draft fiscal note to the extent that actual experience differs from the actuarial assumptions.

HOW THE RESULTS CHANGE WHEN THE ASSUMPTIONS CHANGE

To determine the sensitivity of the actuarial results to the best-estimate assumptions used in this pricing, we varied the duty-related death assumption for PERS, TRS, SERS, and PSERS. We changed the duty-related death assumption by doubling the rate of deaths that we expect will result from a duty-related injury or illness. We did not increase our mortality assumptions, only the number of deaths that are duty-related. The next table shows our current assumptions ("Base Assumptions") and increased assumptions ("Sensitivity Assumptions") for each system.

	Base Assumptions	Sensitivity Assumptions
PERS	0.0026%	0.0052%
TRS	0.0008%	0.0016%
SERS	0.0026%	0.0052%
PSERS	0.0026%	0.0052%

The result of increasing the rate of deaths from a duty-related injury or illness is detailed in the following table. We compare the assumptions used in this proposal ("Best Estimate Pricing") with the increased assumptions ("Sensitivity Pricing") to show the sensitivity of this pricing on the duty-related death assumptions.

(Dollars in Millions)	Best Estimate Pricing	Sensitivity Pricing
Liability Increase		
PERS	1.8	3.6
TRS	0.3	0.5
SERS	0.6	1.1
PSERS	0.1	0.1
Employer Contribution Rate Increase		
PERS	0.001%	0.003%
TRS	0.001%	0.001%
SERS	0.003%	0.007%
PSERS	0.001%	0.002%
25 Year Budget Impacts (2011-2036)		
General Fund - State		
PERS	1.7	3.4
TRS	1.0	1.9
SERS	1.4	2.9
PSERS	0.1	0.2
Total Employer		
PERS	8.6	17.3
TRS	1.5	2.9
SERS	3.0	6.4
PSERS	0.2	0.3

There is also the possibility that fewer duty-related deaths will occur than we assume for each system in the future. If we tested the sensitivity of the results to lower rates, we would expect lower costs than our pricing of this proposal shows.

ACTUARY'S CERTIFICATION

The undersigned hereby certifies that:

1. The actuarial cost and asset valuation methods are appropriate for the purposes of this pricing exercise.
2. The actuarial assumptions and methods 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, assumptions, and data may also be reasonable and might produce different results.
5. We prepared this draft fiscal note for the Select Committee on Pension Policy during the 2010 Interim.
6. We prepared this draft fiscal note and provided opinions 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.

While this draft fiscal note is meant to be complete, the undersigned is available to provide extra advice and explanations as needed.

Lisa A. Won, ASA, MAAA
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 actuarial accrued 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 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.

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 that 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.