

2003 LEOFF 2 Actuarial Valuation Report



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A special thank you to Charles Middleton for the use of his "firefighter saving girl" photo.

Additional assistance provided by

Department of Printing

Department of Retirement Systems

Office of the State Treasurer

State Investment Board

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WASHINGTON STATE LEGISLATURE

Office of the State Actuary

Law Enforcement Officers and Firefighters Retirement System Plan 2 Actuarial Valuation Report (AVR) As of September 30, 2003 December 2004

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 as of the valuation date September 30, 2003. The report is organized in the following four sections:

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

The Summary of Key Results section provides a high-level executive summary of the valuation results for the LEOFF 2 system. The remaining sections of the report provide detailed actuarial asset and liability information. The Appendix provides a summary of the principal actuarial assumptions and methods, summary of the major plan provisions, age-service distributions, historical data and a glossary of actuarial terms used throughout this report.

We encourage you to submit any questions you might have concerning this report to our regular or e-mail address below. We also invite you to visit our website (<http://osa.leg.wa.gov>) for further information regarding the actuarial funding of the Washington State retirement systems.

Sincerely,

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Summary of Key Results



Summary of Key Results

Contribution Rates

Member and employer contribution rates determined from the actuarial valuation are expressed as a percentage of salary and summarized below along with comparable rates from the previous valuation. See the Actuarial Exhibits section of this report for the development of these rates.

Contribution Rates		
	2003	2002
Member	7.20%	6.41%
Employer	4.32%	3.84%
Total State	2.88%	2.57%

Contribution Rate-Setting Cycle

Under current Washington State law, in September of even-numbered years, the LEOFF Plan 2 Retirement Board (the Board) reviews the basic contribution rates recommended by the actuary retained by the Board based on an actuarial valuation performed on asset, participant and plan information compiled in odd-numbered years. The Board adopts contribution rates for LEOFF Plan 2 as provided under RCW 41.26.720(1)(a) and the 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 that are enacted following the adoption of the basic rates by the Board. Supplemental contribution rates are included in the basic rates at the beginning of the next contribution rate-setting cycle.

Funding Policy

The funding policy of the Legislature is contained in Chapter 41.45 RCW - Actuarial Funding of State Retirement Systems. RCW 41.45.010 outlines the intent to achieve the following goals:

- To provide a dependable and systematic process for funding the benefits to members and retirees of the Washington State Retirement Systems;
- To continue to fully fund the LEOFF Plan 2, as provided by law;
- To establish predictable long-term employer contribution rates which will remain a relatively constant proportion of the future state budgets; and
- To fund, to the extent feasible, benefit increases 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.

Comments on 2003 Results

Short-term actuarial gains or losses occur when actual economic and demographic experience differs from what was assumed in the valuation. Actuarial gains will reduce contribution rates; whereas, actuarial losses will increase contribution rates. Under a reasonable set of actuarial assumptions and methods, actuarial gains and losses will offset over long-term experience periods.

Significant changes in plan provisions or actuarial assumptions and methods will also have an impact on contribution rates. Significant factors that impacted the results of this valuation include the following:

- The actual rate of investment return for the plan year was above the assumed rate of 8%. Actual investment return was 14.67% (time weighted).;
- New entrants continue to exert a modest upward adjustment on current contribution rates; and
- Actual salary growth was below the assumed growth for the period.

Please see the table, Actuarial Gains/Losses, in the Actuarial Exhibit section of this report for detailed gain and loss information.

Actuarial Liabilities

A summary of key measures of actuarial liability is shown below along with comparable information from last year's valuation. See the Actuarial Exhibits section of this report for additional information on the plan's actuarial liability. See the Glossary for a brief explanation of the actuarial terms.

Actuarial Liabilities		
<i>(Dollars in millions)</i>	2003	2002
Present Value of Fully Projected Benefits	\$4,383	\$4,042
Unfunded Actuarial Accrued Liability	N/A	N/A
Present Value of Credited Projected Benefits	2,194	1,937
Valuation Interest Rate	8.00%	8.00%

Assets

The combined market value of assets and actuarial (or smoothed) value of assets are shown below along with approximate rates of investment return. 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.

Section 1
Summary of Key Results

Assets		
<i>(Dollars in millions)</i>	2003	2002
Market Value of Assets	\$2,541	\$2,136
Actuarial Value of Assets	\$2,740	2,646
Contributions*	88	80
Disbursements	10	11
Investment Return	327	(142)
Rate of Return on Assets	14.67%	(6.50%)

*Employee and Employer

Funded Status

Several key measures of the plan's funded status are displayed below.

Funded Status		
<i>(Dollars in millions)</i>	2003	2002
a. Present Value of Credited Projected Benefits	\$2,194	\$1,937
b. Actuarial Value of Assets	\$2,740	2,646
c. Unfunded Liability (a-b)	(547)	(709)
d. Credited Projected Funded Ratio (b/a)	125%	137%

Participant Data

Participant data used in the actuarial valuation for the plan year ending September 30, 2003 are summarized below along with comparable information from last year's valuation. See the Participant Data section of this report for additional information on the plan's participant data.

Participant Data		
	2003	2002
Active Members		
Number	14,560	14,011
Total Salaries (in millions)	\$967	\$902
Average Annual Salary	\$66,388	\$64,347
Average Attained Age	39.5	39.0
Average Service	10.7	10.4
Retirees and Beneficiaries		
Number	316	244
Average Annual Benefit	\$16,087	\$14,250
Terminated Members		
Number Vested	439	376
Number "Non-Vested"	1,186	1,137

Key Assumptions

Key economic assumptions used in the actuarial valuation are displayed below. These assumptions were unchanged from the previous year's valuation. See the Appendix - Actuarial Assumptions and Methods for a detailed listing of the actuarial assumptions used in this valuation.

Key Assumptions	
Valuation Interest Rate	8.00%
Salary Increase	4.50%
Inflation	3.50%
Growth in Membership	1.25%

Actuarial Exhibits



Actuarial Certification

This report documents the results of an actuarial valuation of the Law Enforcement and Fire Fighters Retirement System Plan 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 listed above as of the valuation date September 30, 2003 and should not be used for other purposes.

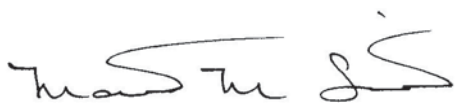
The valuation results summarized in this report involve calculations that require assumptions about future economic and demographic events. We believe that the assumptions and methods used in the underlying valuation are reasonable and appropriate for the primary purpose stated above. The use of another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

The assumptions used in the valuation for investment return, inflation, salary and membership growth were prescribed by the Legislature in 2001. Demographic assumptions were developed from the 1995-2000 experience study performed by the Office of the State Actuary. 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 as of the date of this publication.

The Department of Retirement Systems provided member and beneficiary data. We have checked the data for reasonableness as appropriate based on the purpose of the valuation. The State Investment Board, Department of Retirement Systems and the State Treasurer provided financial and asset information. An audit of the financial and participant data was not performed. We have 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.

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. The combination of the current asset smoothing method with any other funding method or asset allocation policy may not be appropriate.

The undersigned, with actuarial credentials, meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.



Matthew M. Smith, EA, MAAA
State Actuary



Philip Martin McCaulay, FSA, MAAA
Associate Actuary

Contribution Rates

Member and Employer Rate Summary		
	2003	2002
Member	7.20%	6.41%
Employer	4.32%	3.84%
State (Normal Cost)	2.88%	2.57%
State (Plan 1 UAAL)	0.00%	0.00%
Total State	2.88%	2.57%

Development of Employer/State Rates	
a. Total Normal Cost	14.40%
b. Employee Normal Cost	7.20%
c. Employer Contribution (a-b)	7.20%
d. Cost to Amortize UAAL	<u>0.00%</u>
e. Total Employer Contribution Rate (c+d)*	4.32%

**The state pays 20% of the total normal cost for LEOFF 2. This reduces the total employer contribution rate from 7.20% to 4.32%.*

Development of Normal Cost Rates

(Dollars in millions)

1. Calculation of Member Rate

a.	Present Value of Fully Projected Benefits	\$4,379
b.	Valuation Assets	2,740
c.	Unfunded Fully Projected Benefits (a - b)	<u>1,639</u>
d.	Contributions to 2005	171
e.	Adjusted Unfunded (c - d)	<u>\$1,467</u>

Present Value of Projected Salaries to Current Members (PVS)

f.	Plan 1 PVS	N/A
g.	Plan 2 PVS	\$10,221
h.	Plan 3 PVS	N/A
i.	Weighted PVS (2f + 2g + h)	<u>\$20,443</u>
j.	Member Normal Cost (e / i)	7.18%
k.	Change In Plan Provisions (Laws of 2004)	<u>0.02%</u>
l.	Member Contribution Rate (j + k)	7.20%

2. Calculation of Employer Rate

a.	Present Value of Fully Projected Benefits	\$4,379
b.	Valuation Assets	2,740
c.	Unfunded Benefits (a - b)	<u>1,639</u>
d.	Contributions to 2005	171
e.	Unfunded Adjusted for Contributions (c - d)	<u>1,467</u>
f.	Present Value of Member Contributions	734
g.	Employer Responsibility (e - f)	<u>\$734</u>

Present Value of Projected Salaries to Current Members (PVS)

h.	Plan 1 PVS	N/A
i.	Plan 2 PVS	\$10,221
j.	Plan 3 PVS	N/A
k.	Weighted PVS (h + i + j)	<u>\$10,221</u>
l.	Employer Normal Cost (g / k)	7.18%
m.	Change In Plan Provisions (Laws of 2004)	<u>0.02%</u>
n.	Employer Contribution Rate (l + m)	7.20%

3. Summary of Rates

a.	Member Contribution Rate (1.l.)*	7.20%
b.	Employer Contribution Rate (2.n.)*	4.32%
c.	State Contribution Rate*	<u>2.88%</u>
d.	Total Contribution Rate (a + b + c)	14.40%

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

Section 2
Actuarial Exhibits

Amortization of the Plan 1 Unfunded Actuarial Accrued Liability (UAAL)

<i>(Dollars in millions)</i>	LEOFF 1
a. Present Value of Fully Projected Benefits (PVFB)	\$4,342
b. Valuation Assets	4,803
c. Actuarial Present Value of Future Normal Costs	0
d. UAAL (a - b - c)	(462)
e. Expected UAAL Contributions to 2005	0
f. Remaining UAAL (d - e)	(\$462)
g. Amortization Date	6/30/2024
h. Present Value of Projected Salaries beyond 2005	\$16,205
i. Contribution Rate to Amortize the remaining UAAL (f / h)*	(2.85%)

Note: Totals may not agree due to rounding

**LEOFF 1 is fully funded so no UAAL contributions are required*

Actuarial Liabilities

Present Value of Fully Projected Benefits	
<i>(Dollars in millions)</i>	
Active Members	
Retirement	\$4,020
Termination	85
Death	11
Disability	5
Return of Contributions on Termination	80
Return of Contributions on Death	38
Portability	4
Total Active	\$4,242
Inactive Members	
Terminated	\$67
Service Retired	62
Disability Retired	6
Survivors	3
Total Inactive	\$137
Laws of 2004	4
2003 Total	\$4,383
2002 Total	\$4,042

Note: Totals may not agree due to rounding

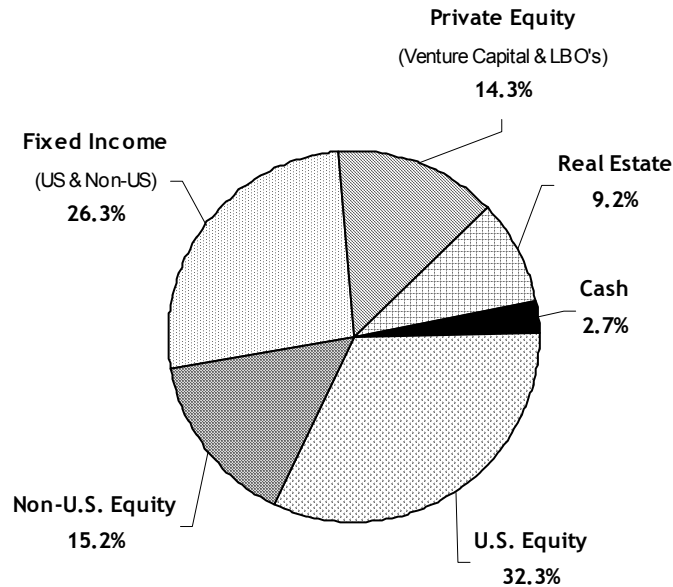
Section 2
Actuarial Exhibits

Present Value of Credited Projected Benefits	
<i>(Dollars in millions)</i>	
Active Members	
Retirement	\$1,939
Termination	47
Death	5
Disability	2
Return of Contributions on Termination	42
Return of Contributions on Death	19
Portability	2
Total Active	\$2,057
Inactive Members	
Terminated	\$65
Service Retired	62
Disability Retired	6
Survivors	3
Total Inactive	\$135
Laws of 2004	2
2003 Total	\$2,194
2002 Total	\$1,937

Note: Totals may not agree due to rounding

Plan Assets

Retirement Commingled Trust Fund (CTF) Asset Allocation



Cash: Money held while being transferred between investments or placed temporarily in an interest-bearing account.

U.S. Fixed Income: U.S. Treasury and government bonds; investment-grade corporate bonds; publicly traded mortgage-backed securities; mortgages; asset-backed and convertible securities.

Non-U.S. Fixed Income: Foreign government bonds.

U.S. Equity: Stock in U.S. companies.

Non-U.S. Equity: Stock in foreign companies.

Venture Capital: Equity financing of early expansion and later-stage growth of small businesses.

Leveraged Buy-outs (LBOs): The purchase of all assets or stock in a company using borrowed funds.

Real Estate: Office and retail space; apartments; warehouses; hotels; etc.

Section 2
Actuarial Exhibits

Change in Market Value of Assets

(Dollars in millions)

2002 Market Value **\$2,136**

Revenue

Contributions

 Employee 44

 Employer/State 44

Total Contributions 88

Investment Return 327

Restorations 0

Transfers In 0

Miscellaneous 0

Total Revenue **\$415**

Disbursements

Withdrawn Annuities

 Monthly Benefits 4

 Refunds 6

Total Benefits 10

Transfers Out 0

Expenses 0

Total Disbursements **\$10**

Payables **\$0**

2003 Market Value **\$2,541**

2003 Actuarial Value **\$2,740**

Ratio **108%**

Note: Totals may not agree due to rounding

Section 2
Actuarial Exhibits

Calculation of Actuarial Value of Assets		
<i>(Dollars in Millions)</i>	Investment Gain/(Loss) for Prior Year	
a. 2002 Market Value (at SIB)	\$	2,131
b. Total Cash Flow		75
c. 2003 Market Value (at SIB)		2,533
d. Actual return (c-b-a)	\$	327
e. Weighted asset amount	\$	2,163
f. Expected return (8% \times e)		173
g. Investment Gain/(Loss) for Prior Year (d-f)		154
h. Dollar weighted rate of return		15.13%

Actuarial Value of Assets as of September 30, 2003		
<i>(Dollars in millions)</i>		
a. Market Value at 9/30/2003		\$2,541
b. Deferred Investment Gains and (Losses)		
	<u>Plan Year Ending</u>	<u>Percent Deferred</u>
	9/30/2003	87.5%
	9/30/2002	50.0%
	12/31/2001	25.0%
	Total	(95)
c. Actuarial Value of Assets (a-b)		\$2,740

Note: Totals may not agree due to rounding

Funded Status

Development of Funded Ratio

(Dollars in millions)

Credited Projected Liability	\$2,194
Valuation Assets	\$2,740
Unfunded Liability	<u>(\$547)</u>

Funded Ratio:

2003	125%
2002	137%
2001 *	154%
2000 *	161%
1999	154%
1998	160%
1997 *	155%
1996	130%
1995	126%
1994 *	124%
1993	127%
1992	128%
1991	154%
1990	153%
1989 *	158%
1988	153%
1987	157%
1986	142%

Note: Totals may not agree due to rounding.

**Assumptions Changed*

Actuarial Gains/Losses

Change in Employer and State Contribution Rate by Source	
Change in Employer Rate	
2002 Contribution Rate	(2.47%)
Laws of 2004	0.00%
2002 Adjusted Contribution Rate	(2.47%)
Economic Gains/Losses	2.48%
Demographic Gains/Losses	0.00%
Other Gains/Losses	0.01%
Total Change	2.49%
2003 Preliminary Contribution Rate	0.02%
Laws of 2004	0.01%
2003 Contribution Rate	0.03%
Change in Normal Costs	
2002 Normal Cost	2.57%
Laws of 2004	0.00%
2002 Adjusted Normal Cost	2.57%
Assets	0.39%
Salaries	(0.15%)
Growth	0.13%
Economic Gains/Losses	0.37%
Termination/Return to Work	(0.02%)
Retirement	0.01%
Demographic Gains/Losses	(0.01%)
Other Gains/Losses	(0.06%)
Total Change	0.30%
2003 Preliminary Normal Cost	2.87%
Laws of 2004	0.01%
2003 Normal Cost	2.88%
Change in UAAL Rate	
2002 UAAL Rate	(5.04%)
Laws of 2004	0.00%
2002 Adjusted UAAL Rate	(5.04%)
Assets	2.60%
Salaries	(0.11%)
Growth	0.00%
Inflation (CPI)	(0.38%)
Economic Gains/Losses	2.11%
Termination/Return to Work	0.00%
Retirement	0.01%
Demographic Gains/Losses	0.01%
Other Gains/Losses	0.07%
Total Change	2.19%
2003 Preliminary UAAL Rate	(2.85%)
Laws of 2004	0.00%
2003 UAAL Rate	(2.85%)

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

Effect of Plan, Assumption and Method Changes

In addition to experience gains or losses, significant changes in plan provisions or actuarial assumptions and methods will also have an impact on contribution rates.

Plan changes:

- HB 2418 (Chapter 4, Laws of 2004)
- HB 2419 (Chapter 5, Laws of 2004)

Assumption Changes:

None.

Method Changes:

Asset valuation method (See Appendix).

The table below shows the combined effect of all 2004 pension legislation.

Effect of Plan, Assumption and Method Changes	
*Before Changes	
Present Value of Fully Projected Benefits	\$4,379
Present Value of Credited Projected Benefits	2,192
Actuarial Value of Assets	2,740
Unfunded Liability	(549)
Employer Contribution Rate	2.87%
 After Changes	
Present Value of Fully Projected Benefits	\$4,383
Present Value of Credited Projected Benefits	2,194
Actuarial Value of Assets	2,740
Unfunded Liability	(547)
Employer Contribution Rate	2.88%
Increase/(Decrease) in Rate	0.01%
<i>*After actuarial gains and losses</i>	

Participant Data



Overview of System Membership

**LEOFF - Law Enforcement and Fire
Fighter's Retirement System**
Chapter 41.26 RCW

Fire fighters; law enforcement officers including sheriffs; university, port, city police officers and enforcement officers with the Department of Fish and Wildlife.

Active Membership By Employer	
State Agencies	86
Higher Education	106
Community Colleges	0
K-12	0
Counties	2,657
County Sub Divisions	28
First Class Cities	4,542
Other Cities	4,642
Ports	174
Education Service District	0
Fire Districts	2,325
Public Utility District	0
Water Districts	0
Energy Northwest	0
Unions	0
TOTAL	14,560

Section 3
Participant Data

The table below summarizes participant data changes from last year's valuation to the current year's valuation. The participant data is divided into two main categories: (1) Actives and (2) Annuitants (receiving a pension or annuity payment). The "+" symbol indicates new participants entering the system or actives and new beneficiaries entering the annuitant status; whereas the "-" symbol indicates participants that have left either active or annuitant status.

Reconciliation of Participant Data	
2002 Actives	14,011
Transfers	0
Hires/Rehires (+)	964
New Retirees (-)	(55)
Deaths (-)	(11)
Terminations (-)	(349)
2003 Actives	14,560
2002 Annuitants	244
New Retirees (+)	74
Annuitant Deaths (-)	(3)
New Survivors (+)	3
Other (-)	(2)
2003 Annuitants	316
Ratio Actives to Annuitants	46.08

Summary of Plan Participants

Summary of Plan Participants		
	2003	2002
Active Members		
Number	14,560	14,011
Total Salaries (millions)	\$967	\$902
Average Age	39.5	39.0
Average Service	10.7	10.4
Average Salary	\$66,388	\$64,347
Terminated Members		
Number Vested	439	376
Number "Non-Vested"	1,186	1,137
Retirees		
Number of Retirees (All)	316	244
Average Monthly Benefit, All Retirees	\$1,341	\$1,188
Number of New "Service Retirees"	66	45
Average Monthly Benefit, New Service Retirees	\$1,720	\$1,583

Section 3
Participant Data

Appendices



Actuarial Assumptions and Methods

Actuarial Cost Methods

The Aggregate Cost Method was used to determine the normal cost and the actuarial accrued liability for retirement, termination and ancillary benefits. Under this method, the unfunded actuarial present value of fully projected benefits is amortized over the future payroll of the active group. The entire contribution is considered normal cost and no unfunded actuarial accrued liability exists.

Asset Valuation Method

The actuarial value of assets is calculated under an adjusted market value method by starting with the market value of assets. For subsequent years the actuarial value of assets is determined by adjusting the market value of assets to reflect the difference between the actual investment return and the expected investment return during each of the last 8 years or, if fewer, the completed years since adoption, at the following rates per year:

Annual Gain/Loss		
Rate of Return	Smoothing Period	Annual Recognition
15% and up	8 years	12.50%
14-15%	7 years	14.29%
13-14%	6 years	16.67%
12-13%	5 years	20.00%
11-12%	4 years	25.00%
10-11%	3 years	33.33%
9-10%	2 years	50.00%
7-9%	1 year	100.00%
6-7%	2 years	50.00%
5-6%	3 years	33.33%
4-5%	4 years	25.00%
3-4%	5 years	20.00%
2-3%	6 years	16.67%
1-2%	7 years	14.29%
1% and lower	8 years	12.50%

Additionally, the actuarial value of assets may not exceed 130% nor drop below 70% of the market value of assets.

Changes in Assumptions and Methods since Last Valuation

The method for calculating the actuarial value of assets has changed. A 30% market value corridor was added to the asset valuation method.

Economic Assumptions

Economic Assumptions	
Annual Growth in Membership	1.25%
Interest on Member Contributions ¹	5.50%
Return on Investment Earnings ²	8.00%
Inflation ³	3.50%
General Salary Increases (due to inflation) ⁴	4.50%
 Annual COLA ⁵	 3.00%

¹Annual rate, compounded quarterly

²Annual rate, compounded annually

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)

Demographic Assumptions

Age	RP-2000 Mortality Rates		Disabled Mortality				Active, Annuitant Mortality							
	Combined Healthy Table		LEOFF 2		LEOFF 1		WSP		LEOFF 2		LEOFF 1		WSP	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
20	0.000345	0.000191	2	2	2	2	2	2	0	0	0	0	0	0
21	0.000357	0.000192	2	2	2	2	2	2	0	0	0	0	0	0
22	0.000366	0.000194	2	2	2	2	2	2	0	0	0	0	0	0
23	0.000373	0.000197	2	2	2	2	2	2	0	0	0	0	0	0
24	0.000376	0.000201	2	2	2	2	2	2	0	0	0	0	0	0
25	0.000376	0.000207	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
26	0.000378	0.000214	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
27	0.000382	0.000223	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
28	0.000393	0.000235	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
29	0.000412	0.000248	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
30	0.000444	0.000264	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
31	0.000499	0.000307	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
32	0.000562	0.000350	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
33	0.000631	0.000394	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
34	0.000702	0.000435	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
35	0.000773	0.000475	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
36	0.000841	0.000514	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
37	0.000904	0.000554	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
38	0.000964	0.000598	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
39	0.001021	0.000648	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
40	0.001079	0.000706	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
41	0.001142	0.000774	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
42	0.001215	0.000852	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
43	0.001299	0.000937	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
44	0.001397	0.001029	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005

RP-2000 Mortality Rates
(Continued)

Combined Healthy Table
 Age Offset (Years)

Disabled Mortality
(Continued)

LEOFF 2 LEOFF 1 WSP

Active, Annuitant Mortality
(Continued)

LEOFF 2 LEOFF 1 WSP

->

Minimum

Probability -->

Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Age
45	0.001508	0.001124	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.001508	0.001124	0.001508	0.001124	45
46	0.001616	0.001223	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.001616	0.001223	0.001616	0.001223	46
47	0.001734	0.001326	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.001734	0.001326	0.001734	0.001326	47
48	0.001860	0.001434	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.001860	0.001434	0.001860	0.001434	48
49	0.001995	0.001550	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.001995	0.001550	0.001995	0.001550	49
50	0.002138	0.001676	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.002138	0.001676	0.002138	0.001676	50
51	0.002449	0.001852	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.002449	0.001852	0.002449	0.001852	51
52	0.002667	0.002018	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.002667	0.002018	0.002667	0.002018	52
53	0.002916	0.002207	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.002916	0.002207	0.002916	0.002207	53
54	0.003196	0.002424	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.003196	0.002424	0.003196	0.002424	54
55	0.003624	0.002717	0.005000	0.005000	0.005000	0.005000	0.005000	0.005000	0.003624	0.002717	0.003624	0.002717	55
56	0.004200	0.003090	0.005273	0.005000	0.005273	0.005000	0.005000	0.005000	0.004200	0.003090	0.004200	0.003090	56
57	0.004693	0.003478	0.005945	0.005000	0.005945	0.005000	0.005000	0.005000	0.004693	0.003478	0.004693	0.003478	57
58	0.005273	0.003923	0.006747	0.005055	0.006747	0.005055	0.006747	0.005055	0.005273	0.003923	0.005273	0.003923	58
59	0.005945	0.004441	0.007676	0.005814	0.007676	0.005814	0.007676	0.005814	0.005945	0.004441	0.005945	0.004441	59
60	0.006747	0.005055	0.008757	0.006657	0.008757	0.006657	0.008757	0.006657	0.006747	0.005055	0.006747	0.005055	60
61	0.007676	0.005814	0.010012	0.007648	0.010012	0.007648	0.010012	0.007648	0.007676	0.005814	0.007676	0.005814	61
62	0.008757	0.006657	0.011280	0.008619	0.011280	0.008619	0.011280	0.008619	0.008757	0.006657	0.008757	0.006657	62
63	0.010012	0.007648	0.012737	0.009706	0.012737	0.009706	0.012737	0.009706	0.010012	0.007648	0.010012	0.007648	63
64	0.011280	0.008619	0.014409	0.010954	0.014409	0.010954	0.014409	0.010954	0.011280	0.008619	0.011280	0.008619	64
65	0.012737	0.009706	0.016075	0.012163	0.016075	0.012163	0.016075	0.012163	0.012737	0.009706	0.012737	0.009706	65
66	0.014409	0.010954	0.017871	0.013445	0.017871	0.013445	0.017871	0.013445	0.014409	0.010954	0.014409	0.010954	66
67	0.016075	0.012163	0.019802	0.014860	0.019802	0.014860	0.019802	0.014860	0.016075	0.012163	0.016075	0.012163	67
68	0.017871	0.013445	0.022206	0.016742	0.022206	0.016742	0.022206	0.016742	0.017871	0.013445	0.017871	0.013445	68
69	0.019802	0.014860	0.024570	0.018579	0.024570	0.018579	0.024570	0.018579	0.019802	0.014860	0.019802	0.014860	69

RP-2000 Mortality Rates (Continued)			Disabled Mortality (Continued)						Active, Annuitant Mortality (Continued)						
			LEOFF 2		LEOFF 1		WSP		LEOFF 2		LEOFF 1		WSP		
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Age
70	0.022206	0.016742	0.027281	0.020665	0.027281	0.020665	0.027281	0.020665	0.022206	0.016742	0.022206	0.016742	0.022206	0.016742	70
71	0.024570	0.018579	0.030387	0.022970	0.030387	0.022970	0.030387	0.022970	0.024570	0.018579	0.024570	0.018579	0.024570	0.018579	71
72	0.027281	0.020665	0.033900	0.025458	0.033900	0.025458	0.033900	0.025458	0.027281	0.020665	0.027281	0.020665	0.027281	0.020665	72
73	0.030387	0.022970	0.037834	0.028106	0.037834	0.028106	0.037834	0.028106	0.030387	0.022970	0.030387	0.022970	0.030387	0.022970	73
74	0.033900	0.025458	0.042169	0.030966	0.042169	0.030966	0.042169	0.030966	0.033900	0.025458	0.033900	0.025458	0.033900	0.025458	74
75	0.037834	0.028106	0.046906	0.034105	0.046906	0.034105	0.046906	0.034105	0.037834	0.028106	0.037834	0.028106	0.037834	0.028106	75
76	0.042169	0.030966	0.052123	0.037595	0.052123	0.037595	0.052123	0.037595	0.042169	0.030966	0.042169	0.030966	0.042169	0.030966	76
77	0.046906	0.034105	0.057927	0.041506	0.057927	0.041506	0.057927	0.041506	0.046906	0.034105	0.046906	0.034105	0.046906	0.034105	77
78	0.052123	0.037595	0.064368	0.045879	0.064368	0.045879	0.064368	0.045879	0.052123	0.037595	0.052123	0.037595	0.052123	0.037595	78
79	0.057927	0.041506	0.072041	0.050780	0.072041	0.050780	0.072041	0.050780	0.057927	0.041506	0.057927	0.041506	0.057927	0.041506	79
80	0.064368	0.045879	0.080486	0.056294	0.080486	0.056294	0.080486	0.056294	0.064368	0.045879	0.064368	0.045879	0.064368	0.045879	80
81	0.072041	0.050780	0.089718	0.062506	0.089718	0.062506	0.089718	0.062506	0.072041	0.050780	0.072041	0.050780	0.072041	0.050780	81
82	0.080486	0.056294	0.099779	0.069517	0.099779	0.069517	0.099779	0.069517	0.080486	0.056294	0.080486	0.056294	0.080486	0.056294	82
83	0.089718	0.062506	0.110757	0.077446	0.110757	0.077446	0.110757	0.077446	0.089718	0.062506	0.089718	0.062506	0.089718	0.062506	83
84	0.099779	0.069517	0.122797	0.086376	0.122797	0.086376	0.122797	0.086376	0.099779	0.069517	0.099779	0.069517	0.099779	0.069517	84
85	0.110757	0.077446	0.136043	0.096337	0.136043	0.096337	0.136043	0.096337	0.110757	0.077446	0.110757	0.077446	0.110757	0.077446	85
86	0.122797	0.086376	0.150590	0.107303	0.150590	0.107303	0.150590	0.107303	0.122797	0.086376	0.122797	0.086376	0.122797	0.086376	86
87	0.136043	0.096337	0.166420	0.119154	0.166420	0.119154	0.166420	0.119154	0.136043	0.096337	0.136043	0.096337	0.136043	0.096337	87
88	0.150590	0.107303	0.183408	0.131682	0.183408	0.131682	0.183408	0.131682	0.150590	0.107303	0.150590	0.107303	0.150590	0.107303	88
89	0.166420	0.119154	0.199769	0.144604	0.199769	0.144604	0.199769	0.144604	0.166420	0.119154	0.166420	0.119154	0.166420	0.119154	89
90	0.183408	0.131682	0.216605	0.157618	0.216605	0.157618	0.216605	0.157618	0.183408	0.131682	0.183408	0.131682	0.183408	0.131682	90
91	0.199769	0.144604	0.233662	0.170433	0.233662	0.170433	0.233662	0.170433	0.199769	0.144604	0.199769	0.144604	0.199769	0.144604	91
92	0.216605	0.157618	0.250693	0.182799	0.250693	0.182799	0.250693	0.182799	0.216605	0.157618	0.216605	0.157618	0.216605	0.157618	92
93	0.233662	0.170433	0.267491	0.194509	0.267491	0.194509	0.267491	0.194509	0.233662	0.170433	0.233662	0.170433	0.233662	0.170433	93
94	0.250693	0.182799	0.283905	0.205379	0.283905	0.205379	0.283905	0.205379	0.250693	0.182799	0.250693	0.182799	0.250693	0.182799	94

Combined Healthy Table
Age Offset (Years)

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Minimum

Probability -->

RP-2000 Mortality Rates (Continued)			Disabled Mortality (Continued)						Active, Annuitant Mortality (Continued)					
Combined Healthy Table			LEOFF 2		LEOFF 1		WSP		LEOFF 2		LEOFF 1		WSP	
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
95	0.267491	0.194509	0.299852	0.215240	0.299852	0.215240	0.299852	0.215240	0.267491	0.194509	0.267491	0.194509	0.267491	0.194509
96	0.283905	0.205379	0.315296	0.223947	0.315296	0.223947	0.315296	0.223947	0.283905	0.205379	0.283905	0.205379	0.283905	0.205379
97	0.299852	0.215240	0.330207	0.231387	0.330207	0.231387	0.330207	0.231387	0.299852	0.215240	0.299852	0.215240	0.299852	0.215240
98	0.315296	0.223947	0.344556	0.237467	0.344556	0.237467	0.344556	0.237467	0.315296	0.223947	0.315296	0.223947	0.315296	0.223947
99	0.330207	0.231387	0.358628	0.244834	0.358628	0.244834	0.358628	0.244834	0.330207	0.231387	0.330207	0.231387	0.330207	0.231387
100	0.344556	0.237467	0.371685	0.254498	0.371685	0.254498	0.371685	0.254498	0.344556	0.237467	0.344556	0.237467	0.344556	0.237467
101	0.358628	0.244834	0.383040	0.266044	0.383040	0.266044	0.383040	0.266044	0.358628	0.244834	0.358628	0.244834	0.358628	0.244834
102	0.371685	0.254498	0.392003	0.279055	0.392003	0.279055	0.392003	0.279055	0.371685	0.254498	0.371685	0.254498	0.371685	0.254498
103	0.383040	0.266044	0.397886	0.293116	0.397886	0.293116	0.397886	0.293116	0.383040	0.266044	0.383040	0.266044	0.383040	0.266044
104	0.392003	0.279055	0.400000	0.307811	0.400000	0.307811	0.400000	0.307811	0.392003	0.279055	0.392003	0.279055	0.392003	0.279055
105	0.397886	0.293116	0.400000	0.322725	0.400000	0.322725	0.400000	0.322725	0.397886	0.293116	0.397886	0.293116	0.397886	0.293116
106	0.400000	0.307811	0.400000	0.337441	0.400000	0.337441	0.400000	0.337441	0.400000	0.307811	0.400000	0.307811	0.400000	0.307811
107	0.400000	0.322725	0.400000	0.351544	0.400000	0.351544	0.400000	0.351544	0.400000	0.322725	0.400000	0.322725	0.400000	0.322725
108	0.400000	0.337441	0.400000	0.364617	0.400000	0.364617	0.400000	0.364617	0.400000	0.337441	0.400000	0.337441	0.400000	0.337441
109	0.400000	0.351544	0.400000	0.376246	0.400000	0.376246	0.400000	0.376246	0.400000	0.351544	0.400000	0.351544	0.400000	0.351544
110	0.400000	0.364617	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Section 4
Appendices

Age	Service Retirement			Disablement			Ratio of Survivors Selecting Annuities*			Age
	LEOFF 2	LEOFF 1	WSP	LEOFF 2	LEOFF 1	WSP	LEOFF 2	LEOFF 1	WSP	
	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	
20	0.00	0.00	0.00	0.000022	0.001000	0.001000	0.00	0.00	0.00	20
21	0.00	0.00	0.00	0.000022	0.001000	0.001000	0.00	0.00	0.00	21
22	0.00	0.00	0.00	0.000022	0.001000	0.001000	0.00	0.00	0.00	22
23	0.00	0.00	0.00	0.000022	0.001000	0.001000	0.00	0.00	0.00	23
24	0.00	0.00	0.00	0.000022	0.001000	0.001000	0.00	0.00	0.00	24
25	0.00	0.00	0.00	0.000022	0.001000	0.001000	0.00	0.00	0.00	25
26	0.00	0.00	0.00	0.000024	0.002397	0.001000	0.00	0.00	0.00	26
27	0.00	0.00	0.00	0.000026	0.003793	0.001000	0.00	0.00	0.00	27
28	0.00	0.00	0.00	0.000028	0.005187	0.001000	0.00	0.00	0.00	28
29	0.00	0.00	0.00	0.000031	0.006578	0.001000	0.00	0.00	0.00	29
30	0.00	0.00	0.00	0.000033	0.007968	0.001000	0.00	0.00	0.00	30
31	0.00	0.00	0.00	0.000035	0.009356	0.001000	0.00	0.00	0.00	31
32	0.00	0.00	0.00	0.000037	0.010742	0.001000	0.00	0.00	0.00	32
33	0.00	0.00	0.00	0.000039	0.012126	0.001000	0.00	0.00	0.00	33
34	0.00	0.00	0.00	0.000042	0.013508	0.001000	0.00	0.00	0.00	34
35	0.00	0.00	0.00	0.000044	0.014888	0.001000	0.00	0.00	0.00	35
36	0.00	0.00	0.00	0.000050	0.016267	0.001000	0.00	0.00	0.00	36
37	0.00	0.00	0.00	0.000057	0.019033	0.001000	0.00	0.00	0.00	37
38	0.00	0.00	0.00	0.000066	0.020514	0.001000	0.00	0.00	0.00	38
39	0.00	0.00	0.00	0.000077	0.021994	0.001000	0.00	0.00	0.00	39
40	0.00	0.00	0.00	0.000088	0.023471	0.001000	0.00	0.60	0.60	40
41	0.00	0.00	0.00	0.000098	0.024946	0.001000	0.00	0.60	0.60	41
42	0.00	0.00	0.00	0.000109	0.026419	0.001000	0.00	0.60	0.60	42
43	0.00	0.00	0.00	0.000123	0.027889	0.001000	0.00	0.60	0.60	43
44	0.00	0.00	0.00	0.000138	0.036042	0.001000	0.00	0.60	0.60	44
45	0.00	0.00	0.31	0.000153	0.042372	0.001000	0.00	0.60	0.60	45
46	0.00	0.00	0.31	0.000197	0.048661	0.001000	0.00	0.60	0.60	46
47	0.00	0.00	0.31	0.000256	0.054909	0.001000	0.00	0.60	0.60	47
48	0.00	0.00	0.31	0.000328	0.061118	0.001000	0.00	0.60	0.60	48
49	0.00	0.00	0.31	0.000424	0.067287	0.001000	0.00	0.60	0.60	49
50	0.10	0.09	0.31	0.000547	0.073417	0.001000	0.25	0.60	0.60	50

*Refers to members leaving survivor who selects annuity payments (rather than a lump sum payment) upon active or terminated vested member's death.

Section 4
Appendices

Age	Service Retirement <i>(Continued)</i>			Disablement <i>(Continued)</i>			Ratio of Survivors Selecting Annuities* <i>(Continued)</i>			Age
	LEOFF 2	LEOFF 1	WSP	LEOFF 2	LEOFF 1	WSP	LEOFF 2	LEOFF 1	WSP	
	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	
51	0.10	0.07	0.23	0.000628	0.079508	0.001000	0.25	0.60	0.60	51
52	0.10	0.08	0.23	0.000722	0.085561	0.001000	0.25	0.60	0.60	52
53	0.16	0.08	0.23	0.000851	0.091576	0.001000	0.25	0.60	0.60	53
54	0.19	0.10	0.23	0.000951	0.097553	0.001000	0.25	0.60	0.60	54
55	0.24	0.16	0.23	0.000951	0.103493	0.001000	0.25	0.60	0.60	55
56	0.25	0.16	0.28	0.000951	0.109395	0.001000	0.25	0.60	0.60	56
57	0.25	0.16	0.28	0.000951	0.115262	0.001000	0.25	0.60	0.60	57
58	0.33	0.23	0.28	0.000951	0.121663	0.001000	0.25	0.60	0.60	58
59	0.33	0.23	0.28	0.000951	0.121663	0.001000	0.25	0.60	0.60	59
60	0.33	0.23	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	60
61	0.37	0.28	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	61
62	0.37	0.28	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	62
63	0.37	0.28	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	63
64	0.48	0.40	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	64
65	1.00	1.00	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	65
66	1.00	1.00	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	66
67	1.00	1.00	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	67
68	1.00	1.00	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	68
69	1.00	1.00	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	69
70	1.00	1.00	1.00	0.000951	0.121663	0.001000	0.50	0.60	0.60	70
71	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	71
72	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	72
73	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	73
74	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	74
75	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	75
76	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	76
77	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	77
78	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	78
79	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	79
80+	N/A	N/A	N/A	N/A	N/A	N/A	0.50	0.60	0.60	80+

*Refers to members leaving survivor who selects annuity payments (rather than a lump sum payment) upon active or terminated vested member's death.

Age and Service Distribution of Active Members
 (Number of Actives and Average Salary)

LEOFF Plan 2:
Attained Age

Attained Age	Attained Years of Service										Total			
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29		30-34	35-39	40 & Over
Under 25	32	76	44	21	5	0	0	0	0	0	0	0	0	178
	\$40,643	\$44,465	\$49,080	\$52,994	\$46,465	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,981
25-29	123	243	286	259	211	283	1	0	0	0	0	0	0	1,406
	\$41,692	\$45,069	\$51,189	\$54,716	\$60,267	\$62,307	*	\$0	\$0	\$0	\$0	\$0	\$0	\$53,566
30-34	109	207	258	235	308	1,395	321	1	0	0	0	0	0	2,834
	\$44,104	\$47,355	\$51,006	\$56,298	\$59,828	\$64,302	\$69,440	*	\$0	\$0	\$0	\$0	\$0	\$60,511
35-39	58	84	143	113	170	1,043	1,221	282	1	0	0	0	0	3,115
	\$46,936	\$52,112	\$51,868	\$58,644	\$60,941	\$65,747	\$74,261	*	\$0	\$0	\$0	\$0	\$0	\$66,262
40-44	33	50	63	67	77	469	906	889	284	6	0	0	0	2,844
	\$49,171	\$54,079	\$52,266	\$56,916	\$58,011	\$64,240	\$70,794	\$74,414	\$79,162	\$81,229	\$0	\$0	\$0	\$70,074
45-49	24	29	22	25	30	230	431	595	839	158	0	0	0	2,383
	\$53,153	\$63,679	\$52,427	\$61,801	\$56,289	\$64,503	\$69,557	\$73,851	\$79,574	\$78,567	\$0	\$0	\$0	\$73,622
50-54	17	22	10	17	15	107	149	269	559	179	0	0	0	1,344
	\$54,063	\$74,806	\$63,250	\$61,213	\$57,925	\$63,453	\$69,046	\$72,629	\$76,469	\$78,069	\$0	\$0	\$0	\$73,245
55-59	5	6	9	2	8	35	49	77	135	37	0	0	0	363
	\$48,795	\$55,524	\$79,143	\$67,824	\$64,472	\$66,319	\$67,388	\$70,739	\$73,976	\$74,406	\$0	\$0	\$0	\$70,938
60-64	0	4	2	0	0	15	16	22	22	3	0	0	0	84
	\$0	\$38,354	\$56,396	\$0	\$0	\$66,501	\$57,305	\$72,793	\$73,799	\$74,047	\$0	\$0	\$0	\$66,997
65-69	0	0	0	0	0	1	3	5	0	0	0	0	0	9
	\$0	\$0	\$0	\$0	\$0	* \$84,787	\$63,474	\$0	\$0	\$0	\$0	\$0	\$0	\$74,156
70 & 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	401	721	837	739	824	3,578	3,097	2,140	1,840	383	0	0	0	14,560
	\$44,937	\$48,813	\$51,709	\$56,395	\$59,800	\$64,582	\$69,917	\$73,837	\$78,096	\$77,939	\$0	\$0	\$0	\$66,388

Average: Age 39.5 Number of Participants: Vested 10,557 Males 13,360 Early Retirement Eligible: 540
 Service 10.7 Not Vested 4,003 Females 1,200 Normal Retirement Eligible: 754

*Salary omitted for privacy reasons

*Numbers of participants eligible for early and normal retirement are estimates only

Section 4
Appendices

Service Years	Termination <i>(Continued)</i>				Percent Vested* <i>(Continued)</i>				Salary Scale <i>(Continued)</i>					
	LEOFF 2		WSP		LEOFF 2		WSP		LEOFF 2		LEOFF 1		WSP	
	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	Male & Female	% Increase	Salary Ratio	% Increase	Salary Ratio	% Increase	Salary Ratio
25	0.0070	0.0070	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
26	0.0070	0.0070	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
27	0.0070	0.0070	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
28	0.0070	0.0070	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
29	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
30	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
31	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
32	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
33	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
34	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
35	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
36	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
37	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
38	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
39	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
40	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
41	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
42	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
43	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
44	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
45	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
46	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
47	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
48	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
49	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000
50	0.0000	0.0000	0.0000	0.0000	1.00	N/A	N/A	1.00	0.00%	1.000	0.00%	1.000	0.00%	1.000

*Probability of vesting upon termination

Early Retirement Reduction Factors

Years	LEOFF2, WSP*	Subsidized 3%**
0	1.0000	1.00
1	0.9200	0.97
2	0.8400	0.94
3	0.7600	0.91
4	0.7100	0.88
5	0.6600	0.85
6	0.6100	0.82
7	0.5600	0.79
8	0.5100	0.76
9	0.4700	0.73
10	0.4300	0.70
11	0.3900	N/A
12	0.3500	N/A
13	0.3100	N/A
14	0.2900	N/A
15	0.2700	N/A
16	0.2500	N/A
17	0.2300	N/A
18	0.2100	N/A
19	0.2000	N/A
20	0.1900	N/A
21	0.1800	N/A
22	0.1700	N/A
23	0.1600	N/A
24	0.1500	N/A

Early Retirement Reduction Factors are not applied in LEOFF 1.

**Terminated Vested only.*

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

Early Retirement Reduction Factors

(Continued)

Years	LEOFF2, WSP*	Subsidized 3%**
25	0.1400	N/A
26	0.1300	N/A
27	0.1200	N/A
28	0.1100	N/A
29	0.1000	N/A
30	0.1000	N/A
31	0.1000	N/A
32	0.1000	N/A
33	0.1000	N/A
34	0.1000	N/A
35	0.1000	N/A
36	0.1000	N/A
37	0.1000	N/A
38	0.1000	N/A
39	0.1000	N/A
40	0.1000	N/A
41	0.1000	N/A
42	0.1000	N/A
43	0.1000	N/A
44	0.1000	N/A
45	0.1000	N/A
46	0.1000	N/A
47	0.1000	N/A
48	0.1000	N/A
49	0.1000	N/A

Early Retirement Reduction Factors are not applied in LEOFF 1.

**Terminated Vested only.*

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

Portability Load	
LEOFF 2	0.1%
LEOFF 1	N/A
WSP	0.0%

Reflects portability provisions for each plan

Certain and Life Annuities: Years Certain	
LEOFF 2	5
LEOFF 1	N/A
WSP	N/A

The certain period applies to only the "annuity" portion of the benefit, typically 30% of the total benefit

Member/Beneficiary Age Difference (In Years)		
	Male Member	Female Member
LEOFF 2	4	(4)
LEOFF 1	4	(4)
WSP	3	(2)

Age difference is Member age minus Beneficiary age

Summary of Plan Provisions

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	Accrued benefit, actuarially reduced (minimum of 10% of AFC if duty-related)
COLA	Lesser of CPI* or 3%
Minimum Benefit per Month / YOS	n/a
Gain-Sharing Benefit Provisions	n/a
Changes in Plan Provisions Since Last Valuation	Full line-of-duty death survivor benefit (C 5 L 04); Duty disability benefit minimum (C 4 L 04)
Benefits not Included in This Valuation	None

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

Age/Service Distributions

Age and Service Distribution of Active Members
 (Number of Actives and Average Salary)

LEOFF Plan 2: Attained Age	Attained Years of Service													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 25	32	76	44	21	5	0	0	0	0	0	0	0	0	0	178
	\$40,643	\$44,465	\$49,080	\$52,994	\$46,465	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,981
25-29	123	243	286	259	211	283	1	0	0	0	0	0	0	0	1,406
	\$41,692	\$45,069	\$51,189	\$54,716	\$60,267	\$62,307	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$53,566
30-34	109	207	258	235	308	1,395	321	1	0	0	0	0	0	0	2,834
	\$44,104	\$47,355	\$51,006	\$56,298	\$59,828	\$64,302	\$69,440	*	\$0	\$0	\$0	\$0	\$0	\$0	\$60,511
35-39	58	84	143	113	170	1,043	1,221	282	1	0	0	0	0	0	3,115
	\$46,936	\$52,112	\$51,868	\$58,644	\$60,941	\$65,747	\$69,853	\$74,261	*	\$0	\$0	\$0	\$0	\$0	\$66,262
40-44	33	50	63	67	77	469	906	889	284	6	0	0	0	0	2,844
	\$49,171	\$54,079	\$52,266	\$56,916	\$58,011	\$64,240	\$70,794	\$74,414	\$79,162	\$81,229	\$0	\$0	\$0	\$0	\$70,074
45-49	24	29	22	25	30	230	431	595	839	158	0	0	0	0	2,383
	\$53,153	\$63,679	\$52,427	\$61,801	\$56,289	\$64,503	\$69,557	\$73,851	\$79,574	\$78,567	\$0	\$0	\$0	\$0	\$73,622
50-54	17	22	10	17	15	107	149	269	559	179	0	0	0	0	1,344
	\$54,063	\$74,806	\$63,250	\$61,213	\$57,925	\$63,453	\$69,046	\$72,629	\$76,469	\$78,069	\$0	\$0	\$0	\$0	\$73,245
55-59	5	6	9	2	8	35	49	77	135	37	0	0	0	0	363
	\$48,795	\$55,524	\$79,143	\$67,824	\$64,472	\$66,319	\$67,388	\$70,739	\$73,976	\$74,406	\$0	\$0	\$0	\$0	\$70,938
60-64	0	4	2	0	0	15	16	22	22	3	0	0	0	0	84
	\$0	\$38,354	\$56,396	\$0	\$0	\$66,501	\$57,305	\$72,793	\$73,799	\$74,047	\$0	\$0	\$0	\$0	\$66,997
65-69	0	0	0	0	0	1	3	5	0	0	0	0	0	0	9
	\$0	\$0	\$0	\$0	\$0	* \$84,787	\$63,474	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$74,156
70 & 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
Total	401	721	837	739	824	3,578	3,097	2,140	1,840	383	0	0	0	0	14,560
	\$44,937	\$48,813	\$51,709	\$56,395	\$59,800	\$64,582	\$69,917	\$73,837	\$78,096	\$77,939	\$0	\$0	\$0	\$0	\$66,388

Average: Age 39.5 Number of Participants: Vested 10,557 Males 13,360 Early Retirement Eligible: 540
 Service 10.7 Not Vested 4,003 Females 1,200 Normal Retirement Eligible: 754

*Salary omitted for privacy reasons

Historical Data

Historical Data					
(Dollars in millions)	2003	2002	2001 ¹	2000	1999
Contribution Information					
Employer Rate	4.32%	3.84%	3.03%	2.41%	3.46%
State Rate	2.88%	2.57%	2.02%	1.61%	2.31%
Employee Rate	7.20%	6.41%	5.05%	4.02%	5.77%
Funded Status					
Credited Projected Liability	\$2,194	\$1,937	\$1,668	\$1,528	\$1,408
Market Value of Assets	\$2,541	\$2,136	\$2,210	\$2,378	\$2,288
Actuarial Value of Assets	\$2,740	\$2,646	\$2,576	\$2,459	\$2,163
Unfunded Liability	(\$547)	(\$709)	(\$907)	(\$931)	(\$755)
Funded Ratio	124.91%	136.62%	154.00%	161.00%	154.00%
Participant Data					
Number of Actives	14,560	14,011	13,585	13,133	12,713
Total Annual Salaries	\$967	\$902	\$831	\$780	\$725
Number of Terminated Vested	439	376	303	248	216
Number of Terminated, Not Vested	1,186	1,137	1,051	940	875
Number of Retirees and Beneficiaries	316	244	184	143	100
Total Annual Benefits	\$5	\$3	\$2	\$2	\$1
Assumptions					
Valuation Interest Rate	8.00%	8.00%	5.90%	8.00%	7.50%
Salary Increase	7.70%	7.80%	5.80%	4.00%	4.00%
Inflation ²	3.50%	3.50%	3.50%	3.50%	3.50%
Growth in Membership	1.25%	1.25%	0.94%	1.25%	1.25%
Actuarial Experience					
Return on Market Value	15.13%	(6.31%)	(9.77%)	0.37%	18.54%
Return on Actuarial Value	0.60%	0.10%	2.00%	9.80%	16.60%
Salary Increase	4.80%	7.00%	4.60%	5.90%	3.90%
Inflation	1.81%	3.55%	3.75%	3.10%	2.63%
Growth in Membership	2.59%	1.73%	1.83%	1.22%	4.33%
COLA ³	3.00%	3.00%	3.00%	3.00%	2.63%-3%

¹For the 2001 valuation, the salary, interest, and growth rates were not annualized. They reflect the actual valuation period of nine months.

²Based on the assumption for prior year's CPI: Urban Wage Earners & Clerical Workers, Seattle-Tacoma-Bremerton, WA - All Items

³COLA 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 that has been earned (or accrued) as of the valuation date.

Actuarial gain or loss: Experience of the plan, from one year to the next, which differs from that assumed will result in an actuarial gain or loss. For example, an actuarial gain would occur if assets earned 10% for a given year since the assumed interest rate in the valuation is 8%.

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). It is common for actuaries to select an actuarial valuation method that smoothes the effects of short-term volatility in the market value of assets.

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 is the total normal cost of the plan reduced by employee contributions.

Present value of credited projected benefits: The actuarial accrued liability computed under the Projected Unit Credit (PUC) funding method.

Present value of fully projected benefits: Computed by projecting the total future benefit cash flow from the plan, using actuarial assumptions (i.e., probability of death, retirement, salary increases, etc.), and then discounting the cash flow to the valuation date using the valuation interest rate.

Projected Unit Credit (PUC) Funding Method: The PUC funding 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 to be earned in the current plan year.

Unfunded actuarial accrued liability: 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.