

Washington State



2013 Actuarial Valuation

September 2014



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Contents

Letter of Introduction v

Section One - Summary of Key Results 1-8

Intended Use 3

Contribution Rates 3

Contribution Rate-Setting Cycle 4

Funding Policy 4

Comments on 2013 Results 5

Actuarial Liabilities 6

Assets 6

Funded Status 7

Participant Data 7

Key Assumptions 8

Section Two - Actuarial Exhibits 9-44

Actuarial Certification Letter 11

Contribution Rates 14

Actuarial Liabilities 19

Plan Assets 30

Funded Status 36

Actuarial Gains/Losses 40

Effect of Plan, Assumption, and Method Changes 43

Section Three - Participant Data 45-52

Overview of System Membership 47

Summary of Plan Participants 49

Section Four - Appendices 53-152

Actuarial Methods and Assumptions 55

Medical Premium Reimbursements 77

Miscellaneous Assumptions/Methods 80

Summary of Plan Provisions 81

Age/Service Distributions 87

Age/Years Retired Distributions 102

Historical Data 144

Glossary 151



Letter of Introduction



Office of the State Actuary

“Securing tomorrow’s pensions today.”

Letter of Introduction Report of the Combined Actuarial Valuation As of June 30, 2013

September 2014

As required under Chapter 41.45 RCW, this report documents the results of an actuarial valuation of the following Washington State retirement systems.

- ❖ Public Employees’ Retirement System.
- ❖ Teachers’ Retirement System.
- ❖ School Employees’ Retirement System.
- ❖ Public Safety Employees’ Retirement System.
- ❖ Law Enforcement Officers’ and Fire Fighters’ Retirement System.
- ❖ Washington State Patrol Retirement System.

The primary purpose of this valuation is to determine contribution requirements for the systems listed above for the plan year ending June 30, 2013, under the funding policy established by the Legislature. This valuation also provides information on the funding progress and developments in the plans over the past year.

This 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 summary of the valuation results for all systems combined. The next two sections of the report provide detailed actuarial asset and liability information and participant data for each system and plan separately. The Appendices provide a summary of the principal actuarial assumptions and methods, a summary of the major plan provisions, and additional information used to prepare this valuation.

We encourage you to submit any questions you might have concerning this report to our regular address or our e-mail address at state.actuary@leg.wa.gov. We also invite you to visit our website (osa.leg.wa.gov), for further information regarding the actuarial funding of the Washington State retirement systems.

Sincerely,

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

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

1

Summary of Key Results



Intended Use

The purpose of this report is to develop contribution rates required to fund the Washington State retirement systems based on the funding policy described in this section. This

report provides information on the contribution rates, funding progress, and developments in the plans over the past year. This report also discloses the data, assumptions, and methods

we used to develop the contribution rates. This report is not intended to satisfy the accounting requirements under the Governmental Accounting Standards Board rules (GASB).

Contribution Rates

The Office of the State Actuary (OSA) determined the member and employer contribution rates as a percentage of salary. The summary table below shows contribution rates based on the 2013 valuation along with rates

from the previous valuation. The **Actuarial Exhibits** section of this report shows how we developed these rates.

No member or employer/state contributions are required for the Law Enforcement Officers' and Fire Fighters' Retirement System (LEOFF) Plan 1 when the plan remains fully funded. See RCW 41.26.080(2).

Minimum employer contribution rates adopted by the Legislature for the Public Employees' Retirement System (PERS) Plan 1 and the Teachers' Retirement System (TRS) Plan 1 become effective at the beginning of the 2015-17 Biennium.

During the 2014 Interim, the Pension Funding Council (PFC) and LEOFF Plan 2 Retirement Board (LEOFF 2 Board) adopted different rates than those calculated in the 2013 valuation. The PFC adopted contribution rates lower than the

rates calculated in this valuation as part of a three-biennium phase-in. The LEOFF 2 Board adopted higher contribution rates that match the contribution rates collected over the 2013-15 Biennium. The adopted rates are shown in the **Actuarial Exhibits** section of this report and further information is available in the **Actuarial Certification Letter**.

Contribution Rates				
	Plan 1		Plan 2/3	
	2013	2012	2013	2012
PERS				
Member*	6.00%	6.00%	7.00%	4.83%
Total Employer	12.29%	9.15%	12.29%	9.15%
TRS				
Member*	6.00%	6.00%	6.79%	4.95%
Total Employer	14.47%	10.68%	14.47%	10.68%
SERS				
Member*	N/A	N/A	6.70%	4.59%
Total Employer	N/A	N/A	12.88%	9.80%
PSERS				
Member	N/A	N/A	6.89%	6.07%
Total Employer	N/A	N/A	12.07%	10.28%
LEOFF				
Member	0.00%	0.00%	7.97%	7.74%
Employer	0.00%	0.00%	4.78%	4.64%
State	0.00%	0.00%	3.19%	3.10%
WSPRS				
Member	7.19%	6.44%	7.19%	6.44%
Employer (State)	8.79%	7.76%	8.79%	7.76%

Employer rates exclude administrative expense rate.

**Plan 3 members do not contribute to the defined benefit plan.*

Contribution Rate-Setting Cycle

Under current Washington State law, in July of even-numbered years, the PFC reviews the basic contribution rates calculated by OSA based on an actuarial valuation performed on asset, participant, and plan information compiled in odd-numbered years. In calculating basic contribution rates, OSA applies the statutory funding policies described in this section.

The PFC may adopt changes to contribution rates by an affirmative vote of at least four members. The basic rates adopted by the PFC will remain in place for the ensuing biennium, subject to revision by the Legislature. The LEOFF 2 Board performs these duties for LEOFF 2 under the same cycle.

RCW 41.45.070 requires that a temporary and supplemental contribution rate increase be charged to fund the cost of benefit enhancements enacted following the adoption of the basic rates. Supplemental contribution rates are included in the basic rates at the beginning of the next contribution rate-setting cycle.

Funding Policy

Washington State relies on systematic actuarial funding to finance the on-going cost of the state retirement systems. Under this financing approach, we reduce the cost of future pension payments by the expected long-term return on invested contributions.

The state's funding policy is found in Chapter 41.45 RCW — Actuarial Funding of State Retirement Systems. It includes the following goals — to:

- ◆ Provide a dependable and systematic process for funding the benefits to members and retirees of the Washington State retirement systems.
- ◆ Fully fund the retirement system Plans 2 and 3, and Washington State Patrol Retirement System (WSPRS), as provided by law.

- ◆ Fully amortize the total cost of LEOFF Plan 1 not later than June 30, 2024.
- ◆ Fully amortize the Unfunded Actuarial Accrued Liability (UAAL) in PERS Plan 1 and TRS Plan 1 within a rolling ten-year period using methods and assumptions that balance needs for increased benefit security, decreased contribution rate volatility, and affordability of pension contribution rates.
- ◆ Establish long-term employer contribution rates that will remain a relatively predictable proportion of future state budgets.
- ◆ Fund, to the extent feasible, all benefits for Plans 2 and 3 members over the working lives of those members so that the taxpayers who receive the benefit of those members' service pay the cost of those benefits.

Based on the funding policy, the same contribution rate is charged to employers within each system regardless of the plan in which employees hold membership (except for LEOFF). In addition, all benefit increases that become effective after June 30, 2009, for PERS Plan 1 and TRS Plan 1 members, are funded over a fixed ten-year period.

The Washington State Investment Board (WSIB) directs the investment of retirement system contributions. RCW 43.33A.110 requires WSIB to maximize investment returns at a prudent level of risk.

Comments on 2013 Results

Many factors can influence how actuarial valuation results change from one measurement date to the next. Those factors include changes in the covered population, changes in plan provisions, assumptions, and methods, and experience that varies from our expectations.

For this valuation, assumption changes explain most of the changes from last year's report. For all systems, except LEOFF 2, we lowered the long-term assumed rate of investment return from 7.9 to 7.8 percent consistent with state law. We also changed the projection scale we use to estimate future improvement in rates of mortality from 50 percent of Scale AA to 100 percent of Scale BB. Both of these assumption changes lead to lower funded status and higher contribution rates than calculated last valuation.

We observed no significant changes in the covered population and there were no changes in plan provisions. We also made no significant changes to our actuarial methods.

In terms of annual plan experience, the actual rate of investment return was 12.36 percent and above the assumed rate. However, the rate of investment return on the actuarial (or smoothed) value of assets was lower than expected for the plan year. We also observed lower than expected salary growth for the year when estimating plan liabilities.

Detailed gain and loss information by system can be found in the **Actuarial Exhibits** section of this report. Please see the **Actuarial Certification Letter** for additional comments on the 2013 valuation results.



Actuarial Liabilities

The table to the far right summarizes key measures of actuarial liability along with the liabilities from last year's valuation. The Future Value of Fully Projected Benefits represents the total expected value of all future benefit payments for all members of all systems as of the valuation date. The Present Value of Fully Projected Benefits represents today's value of the Future Value of Fully Projected Benefits when we discount future benefit payments with the valuation interest rate. In other words, if we invest the Present Value of Fully Projected Benefits as a lump sum amount at the valuation date and earn the valuation interest rate each year, there would be enough money to pay all expected future benefit payments for current members.

The Present Value of Accrued (Earned) Benefits identifies the portion of the present value of future benefits that has been "earned" as of the

valuation date based on the Projected Unit Credit (PUC) actuarial cost method. The UAAL represents the excess, if any, of the Present Value of Accrued Benefits at the valuation date over the Actuarial Value of Assets. In other words, the UAAL equals the present value of benefits earned at the valuation date not covered by current actuarial assets.

See the **Actuarial Exhibits** section of this report for a summary of actuarial liabilities by system and plan and a disclosure of expected future benefit payments by year for each system and plan. Also, see the **Glossary** for brief explanations of the actuarial terms.

Actuarial Liabilities		
(Dollars in Millions)	2013	2012
All Systems		
Future Value of Fully Projected Benefits	\$559,013	\$436,407
Present Value of Fully Projected Benefits	88,888	79,397
Present Value of Accrued (Earned) Benefits	69,828	62,578
Unfunded Actuarial Accrued Liability*	\$6,245	\$4,132
Valuation Interest Rate**	7.80%	7.90%

*For PERS 1, TRS 1, and LEOFF 1.

**7.50% in LEOFF 2.

Assets

The table on the right shows the combined Market Value of Assets and Actuarial (or smoothed) Value of Assets along with approximate rates of investment return.

To limit the volatility in contribution rates and funded status due to short-term market fluctuations, we smooth (or defer) the difference between actual and expected annual investment returns over a period not to exceed eight years. The Actuarial Value of Assets equals the Market Value of Assets less the Total Deferred Investment Gains and (Losses) at the valuation date. The Actuarial Value of Assets can never be less than 70 percent or greater than 130 percent of the Market Value of Assets.

Assets		
(Dollars in Millions)	2013	2012
All Systems		
Market Value of Assets	\$62,213	\$56,753
Actuarial Value of Assets	65,458	63,122
Contributions*	1,807	1,754
Disbursements	3,302	3,137
Investment Return	6,907	747
Other**	\$48	\$39
Rate of Return on Assets***	12.36%	1.40%

*Employee and Employer.

**Includes transfers, restorations, payables, etc.

***This is the time-weighted rate of return on the Market Value of Assets, net of expenses. The Actuarial Value of Assets is used in determining contribution rates.

See the **Actuarial Exhibits** section of this report for a summary of assets by system and plan, and for the development of the Actuarial Value of Assets.

Funded Status

The funded status helps readers evaluate the health of a pension plan. A history of funded status measured consistently over a defined period helps readers evaluate a plan's funding progress over time. The funded status represents the portion of the present value of earned benefits covered by today's actuarial assets. A plan with a 100 percent funded status has one dollar in actuarial assets for each dollar of earned (or accrued) liability at the valuation date. A plan with a funded status of at least 100 percent is generally considered to be on target with its financing plan. However, a plan more/less than 100 percent funded is not automatically considered over-funded/at-risk.

We use the PUC actuarial cost method to report the funded status of the plans. The PUC method takes into account future salary and service growth for purposes of determining future benefit amounts and eligibility for those benefits, but only reflects service credit earned at the valuation date for determining earned (or accrued) benefits.

Comparing the PUC liabilities to the Actuarial Value of Assets provides an appropriate measure of a plan's funded status. Under current GASB rules, the PUC method is one of several acceptable measures of a plan's funded status. Use of another cost method could also be considered appropriate and could produce materially different results.

GASB Statements 67 and 68 become effective after June 15, 2015, replace the current GASB Statements, and require use of the Entry Age Normal Cost Method (EANC) for accounting purposes. We will begin reporting the EANC funded status with the next actuarial valuation report, as of June 30, 2014, to improve consistency between this funding report and future accounting disclosures.

We did not use the PUC cost method to determine contribution requirements in

this valuation. Please see the **Glossary** for a more detailed explanation of PUC.

The following table displays the funded status for all the systems combined. We provide this table for summarization purposes only. Assets from an individual qualified retirement plan may not be used to fund benefits from another plan. See the **Actuarial Exhibits** section of this report for the funded status by system and plan. We also provide a history of funded status since 1986 and funded status under alternate assumptions and methods in the **Actuarial Exhibits** section.

Funded Status		
(Dollars in Millions)	2013	2012
All Systems		
a. Projected Unit Credit Liability	\$69,828	\$62,578
b. Market Value of Assets	62,213	56,753
c. Deferred Gains/(Losses)	(3,245)	(6,369)
d. Actuarial Value of Assets (b-c)	65,458	63,122
e. Unfunded Liability (a-d)	\$4,370	(\$544)
f. Projected Unit Credit Funded Ratio (d/a)	94%	101%

Note: Totals may not agree due to rounding.

Participant Data

The next table summarizes participant data used in the actuarial valuation for the plan year ending June 30, 2013, along with information from last year's valuation. See the **Participant Data** section of this report for participant data summarized by system and plan.

Participant Data		
All Systems	2013	2012
Active Members		
Number	291,345	289,727
Total Salaries (in Millions)	\$16,522	\$16,245
Average Annual Salary	\$56,710	\$56,069
Average Attained Age	47.7	47.8
Average Service	12.4	12.4
Retirees and Beneficiaries		
Number	150,145	143,942
Average Annual Benefit	\$21,637	\$21,321
Terminated Members		
Number Vested	53,356	51,808
Number "Non-Vested"	118,332	116,109

Key Assumptions

This table displays key economic assumptions used in the actuarial valuation.

Key Assumptions	
All Systems	
Valuation Interest Rate*	7.80%
Salary Increase	3.75%
Inflation	3.00%
Growth in Membership**	0.95%

*7.50% in LEOFF 2.

**0.80% in TRS; 1.25% in LEOFF.
Used for the amortization of PERS 1,
TRS 1, and LEOFF 1 UAAL only.

We also reviewed and updated demographic assumptions during our recent experience study. The Experience Study Report, available on our website, discloses all the assumption changes

from the last valuation. See the **Actuarial Methods and Assumptions** in the Appendix for a detailed listing of assumptions used in this valuation.



2

Actuarial Exhibits





Office of the State Actuary

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Actuarial Certification Letter Report of the Combined Actuarial Valuation As of June 30, 2013

September 2014

This report documents the results of an actuarial valuation of the retirement plans defined under Chapters 41.26, 41.32, 41.35, 41.37, 41.40, and 43.43 of the Revised Code of Washington. The primary purpose of this valuation is to determine contribution requirements for the retirement plans as of the June 30, 2013, valuation date consistent with the prescribed funding policies. This valuation also provides information on the funding progress and developments in the plans over the past year. This valuation report should not be used for other purposes. Please replace this report with a more recent report when available.

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 produce materially different results. Actual results may vary from our expectations.

The assumptions used in this valuation for investment return, inflation, salary growth, and membership growth were prescribed by the Legislature. Please see our latest *Economic Experience Study* report for further information on the economic assumptions. We developed the demographic assumptions used in this valuation during the *2007-2012 Demographic Experience Study*. 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 of practice as of the date of this publication.

The Department of Retirement Systems (DRS) provided us with member and beneficiary data. We checked the data for reasonableness as appropriate based on the purpose of the valuation. The Washington State Investment Board (WSIB) and

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DRS provided financial and asset information. An audit of the financial and participant data was not performed. We 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 of WSIB. The combination of the current asset smoothing method with any other funding method or asset allocation policy may not be appropriate. The Legislature may need to revisit the application of the current asset smoothing method with the Plan 1 funding method as the duration of liabilities in those plans becomes shorter.

Under legislation enacted in 2009 (Chapter 561, Laws of 2009), the Unfunded Actuarial Accrued Liability (UAAL) in the Public Employees' Retirement System (PERS) and the Teachers' Retirement System (TRS) Plans 1 must be amortized over a rolling ten-year period, as a level percentage of projected system payroll. The projected payroll includes pay from current members of PERS and TRS Plans 2/3, as well as projected payroll from future new members. For PERS, the projected payroll includes payroll from retirement systems previously covered under PERS. This is a non-standard amortization method since it includes payroll outside the plan. Additionally, the funding method includes minimum contribution rates effective at the beginning of the 2015-17 Biennium. All contributions required under this method are necessary to fully amortize the UAAL in these plans near the previous target date of June 30, 2024. Failure to make all future required contributions may result in premature plan insolvency.

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

Sincerely,

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

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

Contribution Rates

Member and Employer Rate Summary				
	Plan 1		Plan 2/3	
	2013	2012	2013	2012
PERS				
Member*	6.00%	6.00%	7.00%	4.83%
Employer (Normal Cost)	7.11%	4.94%	7.11%	4.94%
Employer (Plan 1 UAAL)	5.18%	4.21%	5.18%	4.21%
Total Employer	12.29%	9.15%	12.29%	9.15%
TRS				
Member*	6.00%	6.00%	6.79%	4.95%
Employer (Normal Cost)	7.56%	5.72%	7.56%	5.72%
Employer (Plan 1 UAAL)	6.91%	4.96%	6.91%	4.96%
Total Employer	14.47%	10.68%	14.47%	10.68%
SERS				
Member*	N/A	N/A	6.70%	4.59%
Employer (Normal Cost)	N/A	N/A	7.70%	5.59%
Employer (PERS Plan 1 UAAL)	N/A	N/A	5.18%	4.21%
Total Employer	N/A	N/A	12.88%	9.80%
PSERS				
Member	N/A	N/A	6.89%	6.07%
Employer (Normal Cost)	N/A	N/A	6.89%	6.07%
Employer (PERS Plan 1 UAAL)	N/A	N/A	5.18%	4.21%
Total Employer	N/A	N/A	12.07%	10.28%
LEOFF				
Member	0.00%	0.00%	7.97%	7.74%
Employer	0.00%	0.00%	4.78%	4.64%
State (Normal Cost)	0.00%	0.00%	3.19%	3.10%
State (Plan 1 UAAL)	0.00%	0.00%	0.00%	0.00%
Total State	0.00%	0.00%	3.19%	3.10%
WSPRS				
Member	7.19%	6.44%	7.19%	6.44%
Employer (State)	8.79%	7.76%	8.79%	7.76%

Note: Employer rates exclude administrative expense rate.

*Plan 3 members do not contribute to the defined benefit plan.

Development of 2013 Employer/State Rates									
	PERS		TRS		SERS	PSERS	LEOFF		WSPRS
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2	
a. Total Normal Cost	13.11%	14.11%	13.56%	14.35%	14.40%	13.78%	0.00%	15.94%	15.98%
b. Member Normal Cost*	6.00%	7.00%	6.00%	6.79%	6.70%	6.89%	0.00%	7.97%	7.19%
c. Employer Contribution (a-b)	7.11%	7.11%	7.56%	7.56%	7.70%	6.89%	0.00%	7.97%	8.79%
d. Cost to Amortize UAAL	5.18%	5.18%	6.91%	6.91%	5.18%	5.18%	0.00%	0.00%	N/A
e. Total Employer Rate (c+d)**	12.29%	12.29%	14.47%	14.47%	12.88%	12.07%	0.00%	4.78%	8.79%

Employer rates exclude administrative expense rate.

*Plan 3 members do not contribute to the defined benefit plan.

**The state pays 20% of the total normal cost for LEOFF 2. This reduces the total employer contribution rate from 7.97% to 4.78%.

TRS Plan 2 Maximum Member Contribution Rates				
Valuation Year	Prior Max	Supplemental	Source	New Max
2013	8.64%	0.00%	N/A	8.64%
2012	8.64%	0.00%	N/A	8.64%
2011	8.64%	0.00%	N/A	8.64%
2010	8.63%	0.01%	C 5 L 11	8.64%
2009	8.63%	0.00%	N/A	8.63%
2008	8.63%	0.00%	N/A	8.63%
2007	8.55%	0.08%	C 101 L 08	8.63%
2006	7.76%	0.79%	C 50 L 07	8.55%
2005	7.75%	0.01%	C 33 L 06	7.76%
2004	7.75%	0.00%	N/A	7.75%
2003	7.75%	0.00%	N/A	7.75%
2002	7.75%	0.00%	N/A	7.75%
2001	7.75%	0.00%	N/A	7.75%
2000	7.75%	0.00%	N/A	7.75%
1999	6.59%	1.16%	C 247 L 00	7.75%
1998	6.59%	0.00%	N/A	6.59%
1997	N/A	N/A	N/A	6.59%

Note: Maximum member contribution rates change each year by 50% of the total supplemental contribution rates shown in the previous valuation.

WSPRS Plan 1/2 Maximum Member Contribution Rates				
Valuation Year	Prior Max	Supplemental	Source	New Max
2013	7.19%	0.00%	N/A	7.19%
2012	7.19%	0.00%	N/A	7.19%
2011	7.19%	0.00%	N/A	7.19%
2010	7.19%	0.00%	N/A	7.19%
2009	7.18%	0.01%	C 261 L 10	7.19%
2008	6.95%	0.23%	C 522 L 09	7.18%
2007	6.95%	0.00%	N/A	6.95%
2006*	N/A	N/A	N/A	6.95%

Note: Maximum member contribution rates change each year by 50% of the total supplemental contribution rates shown in the previous valuation.

* The original maximum contribution rate of 7% was decreased by 0.05% for C 87 L 07.

The tables on the following pages show the development of the normal cost rates. Consistent with current funding policy, the normal cost rates include minimum contribution rates to provide stable and adequate contribution rates over time. The minimum rates

are a percent of the normal cost calculated under the Entry Age Normal (EAN) funding method. The percent varies by plan. Please see the **Glossary** for a more detailed explanation of EAN.



Development of Normal Cost Rates						
(Dollars in Millions)	PERS 2/3	TRS 2/3	SERS 2/3	PSERS 2	LEOFF 2	WSPRS
1. Calculation of Member Normal Cost Rate						
a. Future Value of Fully Projected Benefits	\$247,788	\$115,746	\$29,207	\$9,117	\$85,177	\$7,130
b. Present Value of Fully Projected Benefits	\$33,404	\$12,025	\$4,495	\$595	\$10,314	\$1,132
c. Valuation Assets	24,335	8,406	3,335	224	7,862	1,009
d. Unfunded Fully Projected Benefits (b - c)	9,069	3,619	1,160	371	2,451	122
e. Past Liability Balance	53	209	66	0	0	10
f. Adjusted Unfunded (d - e)	\$9,016	\$3,410	\$1,094	\$371	\$2,451	\$113
Present Value of Projected Salaries to Current Members (PVS)						
g. Plan 1 PVS	N/A	N/A	N/A	N/A	N/A	\$372
h. Plan 2 PVS	56,952	7,650	4,740	2,694	17,563	396
i. Plan 3 PVS	14,870	34,920	6,862	N/A	N/A	N/A
j. Weighted PVS (2g + 2h + i)	\$128,774	\$50,220	\$16,341	\$5,389	\$35,126	\$1,536
k. Employee Normal Cost (f / j)	7.00%	6.79%	6.70%	6.89%	6.98%	7.33%
l. Employee Minimum Contribution Rate	4.40%	5.42%	4.64%	5.93%	7.97%	6.82%
m. Prior Year Employee Maximum Contribution Rate ¹	N/A	8.64%	N/A	N/A	N/A	7.19%
n. Employee Contribution Rate with Max/Min	7.00%	6.79%	6.70%	6.89%	7.97%	7.19%
o. Change In Plan Provisions (Laws of 2014)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
p. Employee Contribution Rate (n + o) ²	7.00%	6.79%	6.70%	6.89%	7.97%	7.19%
2. Calculation of Employer Normal Cost Rate						
a. Present Value of Fully Projected Benefits	\$33,404	\$12,025	\$4,495	\$595	\$10,314	\$1,132
b. Valuation Assets	24,335	8,406	3,335	224	7,862	1,009
c. Unfunded Benefits (a - b)	9,069	3,619	1,160	371	2,451	122
d. Present Value of Employee Contributions	3,987	519	317	186	1,226	56
e. Past Liability Balance	53	209	66	0	0	10
f. Employer Responsibility (c - d - e)	\$5,029	\$2,891	\$777	\$186	\$1,226	\$56
Present Value of Projected Salaries to Current Members (PVS)						
g. Plan 1 PVS	N/A	N/A	N/A	N/A	N/A	372
h. Plan 2 PVS	56,952	7,650	4,740	2,694	17,563	396
i. Plan 3 PVS	14,870	34,920	6,862	N/A	N/A	N/A
j. Total PVS (g + h + i)	\$71,822	\$42,570	\$11,602	\$2,694	\$17,563	\$768
k. Employer Normal Cost (f / j)	7.00%	6.79%	6.70%	6.89%	6.98%	7.33%
l. Employer Minimum Contribution Rate	4.40%	5.42%	4.64%	5.93%	7.97%	6.82%
m. Employer Contribution Rate with Minimum	7.00%	6.79%	6.70%	6.89%	7.97%	7.33%
n. Excess Employer Rate ¹	N/A	0.00%	N/A	N/A	N/A	0.14%
o. Rate to Amortize Past Liability Balance ³	0.11%	0.77%	1.00%	N/A	N/A	1.32%
p. Change In Plan Provisions (Laws of 2014)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
q. Employer Contribution Rate (m + n + o + p)	7.11%	7.56%	7.70%	6.89%	7.97%	8.79%
3. Normal Cost Rates Adopted for 2015-17⁴						
a. Employee Contribution Rate ⁵	6.12%	5.95%	5.63%	6.59%	8.41%	6.69%
b. Employer Contribution Rate ⁵	6.23%	6.72%	6.63%	6.59%	5.05%	8.01%
c. State Contribution Rate ⁵	N/A	N/A	N/A	N/A	3.36%	N/A
d. Total Contribution Rate (a + b + c)	12.35%	12.67%	12.26%	13.18%	16.82%	14.70%

Note: Totals may not agree due to rounding.

¹ WSPRS and TRS 2 employees pay 50% of the total normal cost, not to exceed an adjusted cap. The employer pays the excess.

² Plan 3 members do not contribute to the defined benefit plan.

³ WSPRS liability is attributable to past costs for improved survivor benefits. PERS, TRS, and SERS liability is attributable to past Plan 3 gain-sharing.

⁴ LEOFF 2 rates adopted by LEOFF 2 Board; all others adopted by PFC.

⁵ LEOFF 2 rate: 50% Employee, 30% Employer, 20% State.

Amortization of the Plan 1 Unfunded Actuarial Accrued Liability (UAAL)			
<i>(Dollars in Millions)</i>	PERS 1	TRS 1	LEOFF 1
a. Future Value of Fully Projected Benefits	\$30,891	\$22,455	\$11,500
b. Present Value of Fully Projected Benefits (PVFB)	\$13,012	\$9,491	\$4,420
c. Valuation Assets	\$8,053	\$6,717	\$5,516
d. Actuarial Present Value of Future Normal Costs	\$140	\$68	\$0
e. Balance of Plan 1 Benefit Improvements After 2009	\$127	\$57	N/A
f. UAAL (b - c - d - e)	\$4,692	\$2,649	(\$1,096)
g. Expected UAAL Contributions to 2013	N/A	N/A	\$0
h. Remaining UAAL (f - g)	\$4,692	\$2,649	(\$1,096)
i. Amortization Date	N/A	N/A	6/30/2024
j. Present Value of Projected Salaries*	\$93,173	\$39,184	\$12,646
k. Contribution Rate Before Adjustments (h / j)	5.04%	6.76%	(8.67%)
l. Minimum Contribution Rate	3.50%	5.75%	N/A
m. Preliminary Contribution Rate**	5.04%	6.76%	(8.67%)
n. Plan 1 Benefit Improvements After 2009	0.14%	0.15%	N/A
o. Change In Plan Provisions (Laws of 2014)	0.00%	0.00%	0.00%
p. Contribution Rate to Amortize the UAAL (m + n + o)**	5.18%	6.91%	(8.67%)
Plan 1 UAAL Contribution Rates Adopted by PFC			
Contribution Rate Adopted for 2015-17	4.77%	6.23%	0.00%

Note: Totals may not agree due to rounding.

*Measured under the plan's amortization method.

**No LEOFF 1 UAAL contributions are required when the plan is fully funded under current methods and assumptions.

Actuarial Liabilities

Present Value of Fully Projected Benefits												
(Dollars in Millions)	PERS			TRS			SERS	PSERS	LEOFF			WSPRS
	Plan 1	Plans 2/3	Total	Plan 1	Plans 2/3	Total	Plans 2/3	Plan 2	Plan 1	Plan 2	Total	
Active Members												
Retirement	\$1,600	\$23,380	\$24,980	\$962	\$9,259	\$10,222	\$2,969	\$514	\$163	\$7,637	\$7,800	\$455
Termination	2	813	815	0	305	305	174	35	0	144	144	3
Death	12	236	247	5	78	84	32	4	2	104	106	5
Disability	2	138	139	0	9	9	13	3	1	351	351	2
Return of Contributions on Termination	1	241	242	0	19	19	22	18	0	87	87	2
Return of Contributions on Death	25	208	233	11	19	30	18	7	0	129	129	2
Total Active	\$1,641	\$25,015	\$26,656	\$979	\$9,689	\$10,669	\$3,228	\$581	\$166	\$8,451	\$8,617	\$468
Inactive Members												
Terminated	\$173	\$2,290	\$2,463	\$53	\$762	\$815	\$428	\$12	\$1	\$154	\$155	\$11
Service Retired	10,434	5,746	16,180	8,028	1,523	9,551	804	2	1,874	1,517	3,391	600
Disability Retired	125	125	250	87	11	99	14	0	1,818	123	1,941	7
Survivors	639	228	866	343	39	383	21	0	561	69	630	46
Total Inactive	\$11,371	\$8,389	\$19,760	\$8,511	\$2,336	\$10,847	\$1,267	\$15	\$4,255	\$1,862	\$6,117	\$663
Laws of 2014	0	0	0	0	0	0	0	0	0	0	0	0
2013 Total	\$13,012	\$33,404	\$46,416	\$9,491	\$12,025	\$21,516	\$4,495	\$595	\$4,420	\$10,314	\$14,734	\$1,132
2012 Total	\$12,514	\$28,796	\$41,311	\$9,111	\$10,240	\$19,351	\$3,893	\$488	\$4,132	\$9,203	\$13,335	\$1,019

Note: Totals may not agree due to rounding.

Present Value of Accrued (Earned) Benefits*												
(Dollars in Millions)	PERS			TRS			SERS	PSERS	LEOFF			WSPRS
	Plan 1	Plans 2/3	Total	Plan 1	Plans 2/3	Total	Plans 2/3	Plan 2	Plan 1	Plan 2	Total	
Active Members												
Retirement	\$1,475	\$14,438	\$15,913	\$921	\$5,442	\$6,363	\$1,852	\$139	\$152	\$4,484	\$4,636	\$286
Termination	2	483	485	0	167	168	103	14	0	87	87	2
Death	12	153	164	6	48	54	21	1	2	70	72	4
Disability	2	83	85	0	5	5	7	1	1	226	227	1
Return of Contributions on Termination	1	126	127	0	8	8	11	8	0	52	52	1
Return of Contributions on Death	22	126	148	10	10	20	11	2	0	78	78	1
Total Active	\$1,513	\$15,409	\$16,922	\$937	\$5,681	\$6,618	\$2,006	\$166	\$155	\$4,997	\$5,152	\$296
Inactive Members												
Terminated	\$173	\$2,290	\$2,463	\$53	\$762	\$815	\$428	\$12	\$1	\$154	\$155	\$11
Service Retired	10,434	5,746	16,180	8,028	1,523	9,551	804	2	1,874	1,517	3,391	600
Disability Retired	125	125	250	87	11	99	14	0	1,818	123	1,941	7
Survivors	639	228	866	343	39	383	21	0	561	69	630	46
Total Inactive	\$11,371	\$8,389	\$19,760	\$8,511	\$2,336	\$10,847	\$1,267	\$15	\$4,255	\$1,862	\$6,117	\$663
Laws of 2014	0	0	0	0	0	0	0	0	0	0	0	0
2013 Total	\$12,884	\$23,798	\$36,682	\$9,449	\$8,016	\$17,465	\$3,273	\$180	\$4,410	\$6,859	\$11,269	\$959
2012 Total	\$12,368	\$20,347	\$32,714	\$9,058	\$6,799	\$15,857	\$2,820	\$135	\$4,121	\$6,071	\$10,193	\$859

Note: Totals may not agree due to rounding.

*Calculated using the Projected Unit Credit (PUC) cost method. This method was not used to determine contribution requirements.

Fully Projected Benefit Payments											
PERS - Plan 1											
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$1,220	\$1,175	2038	\$599	\$88	2063	\$14	\$0	2088	\$1	\$0
2014	1,226	1,095	2039	558	76	2064	12	0	2089	1	0
2015	1,230	1,020	2040	515	65	2065	11	0	2090	0	0
2016	1,230	945	2041	473	56	2066	10	0	2091	0	0
2017	1,224	873	2042	431	47	2067	9	0	2092	0	0
2018	1,214	803	2043	390	39	2068	8	0	2093	0	0
2019	1,199	736	2044	350	33	2069	7	0	2094	0	0
2020	1,181	673	2045	311	27	2070	6	0	2095	0	0
2021	1,161	613	2046	274	22	2071	6	0	2096	0	0
2022	1,137	557	2047	240	18	2072	5	0	2097	0	0
2023	1,113	506	2048	207	14	2073	5	0	2098	0	0
2024	1,086	458	2049	178	11	2074	4	0	2099	0	0
2025	1,058	414	2050	152	9	2075	4	0	2100	0	0
2026	1,029	373	2051	128	7	2076	3	0	2101	0	0
2027	999	336	2052	107	6	2077	3	0	2102	0	0
2028	968	302	2053	90	4	2078	3	0	2103	0	0
2029	936	271	2054	74	3	2079	2	0	2104	0	0
2030	902	242	2055	61	3	2080	2	0	2105	0	0
2031	868	216	2056	51	2	2081	2	0	2106	0	0
2032	833	193	2057	42	1	2082	2	0	2107	0	0
2033	797	171	2058	34	1	2083	1	0	2108	0	0
2034	759	151	2059	28	1	2084	1	0	2109	0	0
2035	721	133	2060	24	1	2085	1	0	2110	0	0
2036	681	117	2061	20	1	2086	1	0	2111	0	0
2037	\$641	\$102	2062	\$17	\$0	2087	\$1	\$0	2112	\$0	\$0
									Total	\$30,891	\$13,012

Fully Projected Benefit Payments											
PERS - Plans 2/3											
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$665	\$641	2038	\$5,182	\$763	2063	\$3,839	\$86	2088	\$210	\$1
2014	750	670	2039	5,320	727	2064	3,656	76	2089	165	1
2015	890	738	2040	5,445	690	2065	3,472	67	2090	128	0
2016	1,040	800	2041	5,556	653	2066	3,286	59	2091	98	0
2017	1,199	855	2042	5,656	617	2067	3,100	52	2092	74	0
2018	1,370	906	2043	5,739	581	2068	2,914	45	2093	55	0
2019	1,552	953	2044	5,804	545	2069	2,729	39	2094	40	0
2020	1,743	993	2045	5,845	509	2070	2,545	34	2095	29	0
2021	1,941	1,025	2046	5,865	474	2071	2,363	29	2096	20	0
2022	2,143	1,050	2047	5,862	439	2072	2,183	25	2097	14	0
2023	2,346	1,066	2048	5,837	406	2073	2,006	21	2098	10	0
2024	2,549	1,074	2049	5,793	373	2074	1,833	18	2099	7	0
2025	2,752	1,076	2050	5,729	343	2075	1,663	15	2100	4	0
2026	2,956	1,072	2051	5,646	313	2076	1,500	13	2101	3	0
2027	3,160	1,064	2052	5,547	286	2077	1,342	11	2102	2	0
2028	3,363	1,050	2053	5,434	259	2078	1,192	9	2103	1	0
2029	3,563	1,032	2054	5,309	235	2079	1,049	7	2104	1	0
2030	3,761	1,010	2055	5,172	212	2080	916	6	2105	0	0
2031	3,958	986	2056	5,025	192	2081	791	5	2106	0	0
2032	4,154	960	2057	4,871	172	2082	677	4	2107	0	0
2033	4,345	932	2058	4,710	154	2083	573	3	2108	0	0
2034	4,531	901	2059	4,544	138	2084	480	2	2109	0	0
2035	4,709	869	2060	4,373	123	2085	397	2	2110	0	0
2036	4,876	835	2061	4,198	110	2086	325	1	2111	0	0
2037	\$5,034	\$799	2062	\$4,020	\$98	2087	\$263	\$1	2112	\$0	\$0
									Total	\$247,788	\$33,404

Fully Projected Benefit Payments											
TRS - Plan 1											
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$904	\$870	2038	\$444	\$65	2063	\$10	\$0	2088	\$1	\$0
2014	911	814	2039	416	57	2064	9	0	2089	1	0
2015	913	757	2040	386	49	2065	8	0	2090	1	0
2016	910	699	2041	355	42	2066	7	0	2091	1	0
2017	902	643	2042	324	35	2067	7	0	2092	1	0
2018	891	589	2043	293	30	2068	6	0	2093	1	0
2019	876	538	2044	262	25	2069	6	0	2094	0	0
2020	859	489	2045	232	20	2070	6	0	2095	0	0
2021	840	444	2046	203	16	2071	5	0	2096	0	0
2022	820	402	2047	176	13	2072	5	0	2097	0	0
2023	799	363	2048	150	10	2073	5	0	2098	0	0
2024	777	327	2049	128	8	2074	5	0	2099	0	0
2025	754	295	2050	107	6	2075	4	0	2100	0	0
2026	731	265	2051	89	5	2076	4	0	2101	0	0
2027	708	238	2052	73	4	2077	4	0	2102	0	0
2028	685	214	2053	60	3	2078	3	0	2103	0	0
2029	663	192	2054	49	2	2079	3	0	2104	0	0
2030	640	172	2055	40	2	2080	3	0	2105	0	0
2031	618	154	2056	32	1	2081	3	0	2106	0	0
2032	595	138	2057	26	1	2082	2	0	2107	0	0
2033	572	123	2058	22	1	2083	2	0	2108	0	0
2034	548	109	2059	18	1	2084	2	0	2109	0	0
2035	524	97	2060	15	0	2085	2	0	2110	0	0
2036	499	85	2061	13	0	2086	2	0	2111	0	0
2037	\$472	\$75	2062	\$11	\$0	2087	\$1	\$0	2112	\$0	\$0
Total										\$22,455	\$9,491

Fully Projected Benefit Payments

TRS - Plans 2/3

<i>(Dollars in Millions)</i>											
Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$168	\$162	2038	\$1,978	\$291	2063	\$2,231	\$50	2088	\$164	\$1
2014	201	179	2039	2,071	283	2064	2,159	45	2089	129	0
2015	250	207	2040	2,162	274	2065	2,084	40	2090	100	0
2016	302	232	2041	2,253	265	2066	2,004	36	2091	76	0
2017	355	253	2042	2,345	256	2067	1,922	32	2092	56	0
2018	410	271	2043	2,432	246	2068	1,836	28	2093	41	0
2019	468	287	2044	2,507	235	2069	1,747	25	2094	30	0
2020	527	300	2045	2,571	224	2070	1,655	22	2095	21	0
2021	589	311	2046	2,624	212	2071	1,562	19	2096	15	0
2022	653	320	2047	2,667	200	2072	1,466	17	2097	10	0
2023	719	327	2048	2,698	188	2073	1,369	15	2098	7	0
2024	787	332	2049	2,720	175	2074	1,271	13	2099	4	0
2025	858	335	2050	2,730	163	2075	1,172	11	2100	3	0
2026	930	337	2051	2,731	152	2076	1,073	9	2101	2	0
2027	1,005	338	2052	2,723	140	2077	975	8	2102	1	0
2028	1,083	338	2053	2,706	129	2078	879	6	2103	1	0
2029	1,163	337	2054	2,681	119	2079	784	5	2104	0	0
2030	1,246	335	2055	2,650	109	2080	692	4	2105	0	0
2031	1,333	332	2056	2,613	100	2081	605	4	2106	0	0
2032	1,422	329	2057	2,572	91	2082	522	3	2107	0	0
2033	1,513	325	2058	2,526	83	2083	445	2	2108	0	0
2034	1,606	319	2059	2,475	75	2084	375	2	2109	0	0
2035	1,700	314	2060	2,421	68	2085	312	1	2110	0	0
2036	1,793	307	2061	2,362	62	2086	256	1	2111	0	0
2037	\$1,886	\$299	2062	\$2,298	\$56	2087	\$206	\$1	2112	\$0	\$0
Total										\$115,746	\$12,025

Fully Projected Benefit Payments											
SERS - Plans 2/3											
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$86	\$83	2038	\$680	\$100	2063	\$368	\$8	2088	\$22	\$0
2014	104	92	2039	689	94	2064	346	7	2089	17	0
2015	124	103	2040	696	88	2065	325	6	2090	14	0
2016	146	112	2041	701	82	2066	304	5	2091	10	0
2017	169	121	2042	705	77	2067	284	5	2092	8	0
2018	195	129	2043	706	71	2068	265	4	2093	6	0
2019	222	136	2044	705	66	2069	246	4	2094	4	0
2020	251	143	2045	702	61	2070	229	3	2095	3	0
2021	281	148	2046	696	56	2071	211	3	2096	2	0
2022	312	153	2047	688	52	2072	195	2	2097	2	0
2023	342	156	2048	678	47	2073	179	2	2098	1	0
2024	373	157	2049	666	43	2074	164	2	2099	1	0
2025	403	158	2050	652	39	2075	149	1	2100	0	0
2026	432	157	2051	635	35	2076	135	1	2101	0	0
2027	460	155	2052	617	32	2077	122	1	2102	0	0
2028	488	152	2053	598	29	2078	109	1	2103	0	0
2029	514	149	2054	577	26	2079	97	1	2104	0	0
2030	539	145	2055	555	23	2080	86	1	2105	0	0
2031	563	140	2056	532	20	2081	75	0	2106	0	0
2032	585	135	2057	508	18	2082	65	0	2107	0	0
2033	606	130	2058	484	16	2083	56	0	2108	0	0
2034	625	124	2059	461	14	2084	47	0	2109	0	0
2035	642	118	2060	437	12	2085	40	0	2110	0	0
2036	657	112	2061	413	11	2086	33	0	2111	0	0
2037	\$670	\$106	2062	\$390	\$9	2087	\$27	\$0	2112	\$0	\$0
Total										\$29,207	\$4,495

Fully Projected Benefit Payments											
PSERS - Plan 2											
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$3	\$3	2038	\$114	\$17	2063	\$221	\$5	2088	\$14	\$0
2014	3	3	2039	123	17	2064	216	5	2089	11	0
2015	3	3	2040	133	17	2065	211	4	2090	8	0
2016	4	3	2041	144	17	2066	205	4	2091	6	0
2017	5	3	2042	155	17	2067	198	3	2092	4	0
2018	6	4	2043	166	17	2068	191	3	2093	3	0
2019	7	5	2044	177	17	2069	183	3	2094	2	0
2020	9	5	2045	188	16	2070	175	2	2095	1	0
2021	11	6	2046	199	16	2071	166	2	2096	1	0
2022	14	7	2047	208	16	2072	157	2	2097	1	0
2023	17	8	2048	217	15	2073	147	2	2098	0	0
2024	20	9	2049	224	14	2074	137	1	2099	0	0
2025	24	9	2050	229	14	2075	127	1	2100	0	0
2026	28	10	2051	234	13	2076	116	1	2101	0	0
2027	33	11	2052	237	12	2077	105	1	2102	0	0
2028	38	12	2053	239	11	2078	94	1	2103	0	0
2029	44	13	2054	240	11	2079	83	1	2104	0	0
2030	51	14	2055	241	10	2080	73	0	2105	0	0
2031	58	14	2056	241	9	2081	62	0	2106	0	0
2032	65	15	2057	240	8	2082	53	0	2107	0	0
2033	72	15	2058	238	8	2083	44	0	2108	0	0
2034	80	16	2059	236	7	2084	36	0	2109	0	0
2035	88	16	2060	233	7	2085	29	0	2110	0	0
2036	96	16	2061	230	6	2086	23	0	2111	0	0
2037	\$105	\$17	2062	\$226	\$5	2087	\$18	\$0	2112	\$0	\$0
Total										\$9,117	\$595

Fully Projected Benefit Payments											
LEOFF - Plan 1											
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$357	\$344	2038	\$263	\$39	2063	\$6	\$0	2088	\$0	\$0
2014	365	326	2039	246	34	2064	5	0	2089	0	0
2015	371	307	2040	229	29	2065	4	0	2090	0	0
2016	376	289	2041	211	25	2066	3	0	2091	0	0
2017	381	272	2042	194	21	2067	2	0	2092	0	0
2018	384	254	2043	176	18	2068	2	0	2093	0	0
2019	387	238	2044	159	15	2069	2	0	2094	0	0
2020	389	221	2045	142	12	2070	1	0	2095	0	0
2021	390	206	2046	126	10	2071	1	0	2096	0	0
2022	390	191	2047	111	8	2072	1	0	2097	0	0
2023	389	177	2048	96	7	2073	1	0	2098	0	0
2024	388	164	2049	83	5	2074	1	0	2099	0	0
2025	386	151	2050	72	4	2075	0	0	2100	0	0
2026	382	139	2051	61	3	2076	0	0	2101	0	0
2027	378	127	2052	51	3	2077	0	0	2102	0	0
2028	373	116	2053	43	2	2078	0	0	2103	0	0
2029	367	106	2054	36	2	2079	0	0	2104	0	0
2030	360	97	2055	30	1	2080	0	0	2105	0	0
2031	351	88	2056	25	1	2081	0	0	2106	0	0
2032	342	79	2057	20	1	2082	0	0	2107	0	0
2033	331	71	2058	16	1	2083	0	0	2108	0	0
2034	320	64	2059	13	0	2084	0	0	2109	0	0
2035	307	57	2060	11	0	2085	0	0	2110	0	0
2036	293	50	2061	9	0	2086	0	0	2111	0	0
2037	\$278	\$44	2062	\$7	\$0	2087	\$0	\$0	2112	\$0	\$0
									Total	\$11,500	\$4,420

Fully Projected Benefit Payments											
LEOFF - Plan 2											
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$140	\$135	2038	\$1,678	\$265	2063	\$1,554	\$40	2088	\$45	\$0
2014	168	151	2039	1,747	257	2064	1,481	36	2089	33	0
2015	201	168	2040	1,812	248	2065	1,407	32	2090	23	0
2016	236	184	2041	1,871	238	2066	1,330	28	2091	16	0
2017	275	199	2042	1,925	228	2067	1,252	24	2092	11	0
2018	317	213	2043	1,973	217	2068	1,173	21	2093	8	0
2019	362	226	2044	2,014	206	2069	1,093	18	2094	5	0
2020	410	239	2045	2,049	195	2070	1,014	16	2095	3	0
2021	462	250	2046	2,076	184	2071	934	14	2096	2	0
2022	518	261	2047	2,095	173	2072	856	12	2097	1	0
2023	577	270	2048	2,108	162	2073	778	10	2098	1	0
2024	639	278	2049	2,113	151	2074	702	8	2099	1	0
2025	703	285	2050	2,111	140	2075	628	7	2100	0	0
2026	771	290	2051	2,101	130	2076	556	6	2101	0	0
2027	841	295	2052	2,085	120	2077	488	5	2102	0	0
2028	913	298	2053	2,063	110	2078	423	4	2103	0	0
2029	987	299	2054	2,035	101	2079	362	3	2104	0	0
2030	1,063	300	2055	2,000	93	2080	306	2	2105	0	0
2031	1,140	299	2056	1,960	84	2081	255	2	2106	0	0
2032	1,218	297	2057	1,915	77	2082	209	1	2107	0	0
2033	1,297	295	2058	1,865	69	2083	169	1	2108	0	0
2034	1,376	291	2059	1,811	63	2084	134	1	2109	0	0
2035	1,454	286	2060	1,752	56	2085	105	1	2110	0	0
2036	1,531	280	2061	1,689	51	2086	80	0	2111	0	0
2037	\$1,606	\$273	2062	\$1,623	\$45	2087	\$61	\$0	2112	\$0	\$0
Total										\$85,177	\$10,314

Fully Projected Benefit Payments											
WSPRS - Plans 1/2											
(Dollars in Millions)	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value	Year	Future Value	Present Value
2013	\$47	\$45	2038	\$140	\$21	2063	\$113	\$3	2088	\$4	\$0
2014	49	44	2039	143	19	2064	108	2	2089	3	0
2015	53	44	2040	145	18	2065	103	2	2090	2	0
2016	56	43	2041	146	17	2066	97	2	2091	2	0
2017	60	43	2042	148	16	2067	92	2	2092	1	0
2018	63	42	2043	149	15	2068	86	1	2093	1	0
2019	67	41	2044	149	14	2069	80	1	2094	1	0
2020	70	40	2045	150	13	2070	74	1	2095	0	0
2021	74	39	2046	150	12	2071	68	1	2096	0	0
2022	78	38	2047	151	11	2072	62	1	2097	0	0
2023	82	37	2048	150	10	2073	57	1	2098	0	0
2024	86	36	2049	150	10	2074	51	1	2099	0	0
2025	90	35	2050	149	9	2075	46	0	2100	0	0
2026	95	34	2051	149	8	2076	41	0	2101	0	0
2027	99	33	2052	148	8	2077	36	0	2102	0	0
2028	103	32	2053	146	7	2078	32	0	2103	0	0
2029	107	31	2054	144	6	2079	28	0	2104	0	0
2030	111	30	2055	142	6	2080	24	0	2105	0	0
2031	115	29	2056	140	5	2081	20	0	2106	0	0
2032	119	27	2057	137	5	2082	17	0	2107	0	0
2033	123	26	2058	134	4	2083	14	0	2108	0	0
2034	126	25	2059	131	4	2084	11	0	2109	0	0
2035	130	24	2060	127	4	2085	9	0	2110	0	0
2036	134	23	2061	123	3	2086	7	0	2111	0	0
2037	\$137	\$22	2062	\$118	\$3	2087	\$5	\$0	2112	\$0	\$0
									Total	\$7,130	\$1,132

Plan Assets

Cash: Highly liquid, very safe investments that can be easily converted into cash, such as Treasury Bills and money-market funds.

Fixed Income: Securities representing debt obligations and usually having fixed payments and maturities. Different types of fixed income securities include government and corporate bonds, mortgage-backed securities, asset-backed securities, convertible issues, and may also include money-market instruments.

Innovation: Fund that provides the ability to invest in a broad range of assets that fall outside the traditional asset classes or management style of existing asset classes.

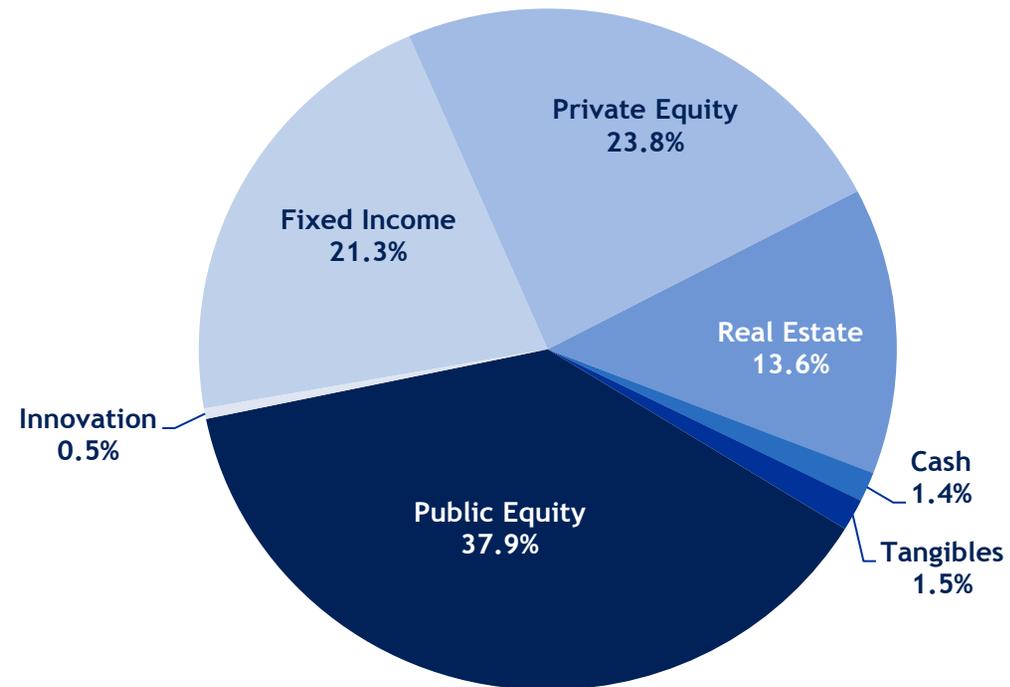
Public Equity: Shares of U.S. and non-U.S. corporations that trade on public exchanges or “over-the-counter.” The ownership of a corporation is represented by shares that are claimed on the corporation’s earnings and assets.

Private Equity: The infusion of equity capital into a private company (one that is not available on the public markets). Private equity investments include securities that are not listed on a public exchange and are not easily accessible to most individuals. These investments range from initial capital in start-up enterprises to leveraged buyouts of mature corporations.

Real Estate: An externally-managed selection of partnership investments with the majority of the partnerships invested in high-quality real estate leased to third parties.

Tangibles: The tangible asset portfolio invests in sectors such as infrastructure, timber, agriculture, natural resources, commodities, or other sectors consistent with the goals of the asset class.

Retirement Commingled Trust Fund (CTF) Asset Allocation



Change in Market Value of Assets						
<i>(Dollars in Millions)</i>	PERS			TRS		
	Plan 1	Plan 2/3*		Plan 1	Plan 2/3*	
	Fund 631	Fund 641	Total	Fund 632	Fund 642	Total
2012 Market Value	\$7,374	\$20,678	\$28,052	\$6,189	\$7,087	\$13,276
Revenue						
Contributions						
Employee	21	316	337	11	34	46
Employer/State	266	389	655	119	229	348
Total Contributions	288	705	992	130	263	393
Investment Return	863	2,556	3,419	721	878	1,598
Restorations	8	20	28	5	1	6
Transfers In	0	0	0	0	0	0
Miscellaneous	0	0	0	0	0	0
Total Revenue	\$1,159	\$3,281	\$4,440	\$855	\$1,142	\$1,998
Disbursements						
Monthly Benefits**	\$1,181	\$460	\$1,641	\$915	\$117	\$1,031
Refunds	4	36	40	2	3	5
Total Benefits	1,185	496	1,681	917	120	1,036
Transfers Out	0	4	4	0	0	0
Expenses	1	1	1	1	0	1
Total Disbursements	\$1,186	\$500	\$1,686	\$917	\$120	\$1,037
Payables	\$0	\$0	\$0	\$0	\$0	\$0
2013 Market Value	\$7,347	\$23,459	\$30,806	\$6,127	\$8,109	\$14,237
2013 Actuarial Value	\$8,053	\$24,335	\$32,388	\$6,717	\$8,406	\$15,123
Ratio (AV/MV)	110%	104%	105%	110%	104%	106%

Note: Totals may not agree due to rounding.

*Defined Benefit portion only.

**TRS Plan 1 value includes annuity cashouts.

Change in Market Value of Assets (Continued)							
(Dollars in Millions)	SERS	PSERS	LEOFF		WSPRS	Total	
	Plan 2/3*	Plan 2	Plan 1	Plan 2			
	Fund 633	Fund 635	Fund 819	Fund 829	Total	Fund 615	
2012 Market Value	\$2,827	\$174	\$4,903	\$6,640	\$11,544	\$879	\$56,753
Revenue							
Contributions							
Employee	26	16	0	136	136	5	566
Employer/State	78	16	1	137	137	6	1,241
Total Contributions	104	31	1	272	273	12	1,807
Investment Return	349	22	586	825	1,412	107	6,907
Restorations	1	0	1	8	9	1	45
Transfers In	0	0	0	2	2	1	3
Miscellaneous	0	0	0	0	0	0	0
Total Revenue	\$454	\$54	\$588	\$1,107	\$1,696	\$120	\$8,762
Disbursements							
Monthly Benefits	66	0	352	101	452	44	3,235
Refunds	3	2	0	9	9	0	58
Total Benefits	69	2	352	109	461	44	3,294
Transfers Out	0	0	0	0	0	0	4
Expenses	0	0	0	1	1	0	4
Total Disbursements	\$69	\$2	\$352	\$110	\$462	\$44	\$3,302
Payables	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2013 Market Value	\$3,212	\$226	\$5,140	\$7,637	\$12,777	\$956	\$62,213
2013 Actuarial Value	\$3,335	\$224	\$5,516	\$7,862	\$13,379	\$1,009	\$65,458
Ratio (AV/MV)	104%	99%	107%	103%	105%	106%	105%

Note: Totals may not agree due to rounding.

*Defined Benefit portion only.

Calculation of Actuarial Value of Assets								
<i>(Dollars in Millions)</i>			PERS 1	PERS 2/3*	TRS 1	TRS 2/3*	SERS 2/3*	
a.	Market Value at 6/30/2013		\$7,347	\$23,459	\$6,127	\$8,109	\$3,212	
b.	Deferred Gains and (Losses)							
	Plan Year Ending	Years Deferred	Years Remaining					
	6/30/2013	5	4	\$252	\$735	\$210	\$253	\$101
	6/30/2012	7	5	(375)	(935)	(315)	(318)	(128)
	6/30/2011	8	5	597	1,350	501	458	184
	6/30/2010	6	2	138	243	113	82	33
	6/30/2009	8	3	(1,198)	(2,057)	(1,000)	(700)	(284)
	6/30/2008	8	2	(253)	(410)	(212)	(141)	(58)
	9/30/2007	8	1	133	198	113	70	28
	Total Deferral			(\$706)	(\$876)	(\$590)	(\$297)	(\$123)
c.	Market Value less Deferral (a-b)		\$8,053	\$24,335	\$6,717	\$8,406	\$3,335	
d.	70% of Market Value of Assets		\$5,143	\$16,421	\$4,289	\$5,676	\$2,248	
e.	130% of Market Value of Assets		\$9,551	\$30,497	\$7,966	\$10,542	\$4,175	
f.	Actuarial Value of Assets**		\$8,053	\$24,335	\$6,717	\$8,406	\$3,335	

Note: Totals may not agree due to rounding.

*Defined Benefit portion only.

**Actuarial Value of Assets can never be less than 70% or greater than 130% of the market value of assets.

Calculation of Actuarial Value of Assets							
<i>(Continued)</i>							
<i>(Dollars in Millions)</i>		PSERS 2	LEOFF 1	LEOFF 2	WSPRS	Total	
a.	Market Value at 6/30/2013	\$226	\$5,140	\$7,637	\$956	\$62,213	
b.	Deferred Gains and (Losses)						
Plan Year Ending	Years Deferred	Years Remaining					
6/30/2013	5	4	\$6	\$170	\$257	\$31	\$2,015
6/30/2012	7	5	(7)	(239)	(278)	(41)	(2,636)
6/30/2011	8	5	8	366	437	62	3,962
6/30/2010	3, 5, 6*	0, 1, 2*	0	78	44	12	744
6/30/2009	8	3	(5)	(683)	(620)	(106)	(6,654)
6/30/2008	8	2	(1)	(143)	(123)	(22)	(1,362)
9/30/2007	8	1	0	74	58	11	686
Total Deferral		\$2	(\$377)	(\$225)	(\$54)	(\$3,245)	
c.	Market Value less Deferral (a-b)	\$224	\$5,516	\$7,862	\$1,009	\$65,458	
d.	70% of Market Value of Assets	\$158	\$3,598	\$5,346	\$669	\$43,549	
e.	130% of Market Value of Assets	\$294	\$6,682	\$9,929	\$1,242	\$80,877	
f.	Actuarial Value of Assets**	\$224	\$5,516	\$7,862	\$1,009	\$65,458	

Note: Totals may not agree due to rounding.

*PSERS Plan 2 = 3 years deferred, 0 years remaining; LEOFF Plan 2 = 5 years deferred, 1 year remaining; all other plans = 6 years deferred, 2 years remaining.

**Actuarial Value of Assets can never be less than 70% or greater than 130% of the market value of assets.

Investment Gains and (Losses) for Prior Year					
(Dollars in Millions)	PERS 1	PERS 2/3*	TRS 1	TRS 2/3*	SERS 2/3*
a. 2012 Market Value (at WSIB)	\$7,378	\$20,630	\$6,194	\$7,055	\$2,812
b. Total Cash Flow	(893)	221	(785)	144	37
c. 2013 Market Value (at WSIB)	7,349	23,411	6,131	8,078	3,199
d. Actual Return (c - b - a)	\$864	\$2,560	\$721	\$880	\$350
e. Weighted Asset Amount	\$6,922	\$20,700	\$5,789	\$7,110	\$2,824
f. Expected Return (7.9% x e)	547	1,635	457	562	223
g. Investment Gain/(Loss) for Prior Year (d - f)	315	919	262	316	126
h. Dollar-Weighted Rate of Return	12.45%	12.34%	12.43%	12.35%	12.36%

Note: Totals may not agree due to rounding.

*Defined Benefit portion only.

Investment Gains and (Losses) for Prior Year					
(Continued)					
(Dollars in Millions)	PSERS 2	LEOFF 1	LEOFF 2	WSPRS	Total
a. 2012 Market Value (at WSIB)	\$172	\$4,903	\$6,620	\$878	\$56,643
b. Total Cash Flow	29	(351)	172	(30)	(1,456)
c. 2013 Market Value (at WSIB)	224	5,139	7,617	955	62,103
d. Actual Return (c - b - a)	\$22	\$587	\$826	\$107	\$6,917
e. Weighted Asset Amount	\$186	\$4,721	\$6,693	\$861	\$55,807
f. Expected Return (7.9% x e)*	15	373	502	68	4,382
g. Investment Gain/(Loss) for Prior Year (d - f)	8	213	322	38	2,519
h. Dollar-Weighted Rate of Return	12.06%	12.41%	12.31%	12.37%	12.37%

Note: Totals may not agree due to rounding.

*The expected return for LEOFF 2 is (7.5% x e).

Funded Status

We report a plan's funded status by comparing the plan's current assets to the present value of earned pensions of its members. Funded status can vary significantly from plan to plan, depending on the assumptions and methods used to determine the plan's assets and liabilities. For this valuation report, we present two funded status measures.

Funded Status on an Actuarial Value Basis

We report the funded status on an actuarial value basis as the ratio of the AVA to the PUC liability calculated using the 7.8 percent valuation interest rate assumption (7.5 percent for the Law Enforcement Officers' and Fire Fighters' [LEOFF] Retirement Plan 2). We assume the plan is ongoing and, therefore, we use the same long-term assumptions to develop the liabilities as we used for determining the contribution requirements of the plan. We don't expect the assumptions to match actual experience over short-term periods. However, we do expect these assumptions to reasonably approximate average annual experience over long-term periods. This measure of funded status is consistent with the state's current funding policy and financing plan for future retirement benefits.

We use an asset valuation method to determine the AVA. This asset valuation method smooths the inherent volatility in the MVA by deferring a portion of annual investment gains or losses for a certain number of years. Investment gains and losses occur when the annual return on

The first funded status measure compares the Actuarial Value of Assets (AVA) to the Projected Unit Credit (PUC) liabilities calculated using a long-term interest assumption. The second measure compares the Market Value of Assets (MVA) to the PUC liabilities calculated using a

investments varies from the long-term assumed rate. To determine the 2013 investment gains or losses, we used an investment return assumption of 7.9 percent (7.5 percent for LEOFF 2). The AVA provides a more stable measure of the plan's assets on an ongoing basis.

We used the PUC actuarial cost method to determine the present value of earned pensions. The PUC liabilities are actuarial liabilities based on members' earned service credit as of the valuation date. They include future assumed salary increases and reflect future service credits for determining benefit eligibility. The PUC liabilities are discounted to the valuation date using the valuation interest rate to determine the present value (today's value). The valuation interest rate is consistent with the long-term expected return on invested contributions.

Comparing the PUC liabilities to the AVA provides an appropriate measure of a plan's funded status. Under current Governmental Accounting Standards Board (GASB) rules, the PUC method is one of several acceptable

short-term interest assumption. The next sections describe these measures in more detail and display the resulting funded statuses by plan. Please see the [Glossary](#) for an explanation of the PUC actuarial cost method.

measures of a plan's funded status. Use of another cost method could also be considered appropriate and could produce materially different results. A plan with a funded status under this measurement of at least 100 percent is generally considered to be on target with its financing plan. However, a plan more/less than 100 percent funded is not automatically considered over-funded/at-risk.

GASB Statements 67 and 68 become effective after June 15, 2015, replace the current GASB Statements, and require use of the Entry Age Normal Cost Method (EANC) for accounting purposes. We will begin reporting the EANC funded status with the next actuarial valuation report, as of June 30, 2014.

The table on the following page displays the funded status on an actuarial value basis for each plan.

Projected Unit Credit Funded Status on an Actuarial Value Basis*										
(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
PUC Liability	\$12,884	\$23,798	\$9,449	\$8,016	\$3,273	\$180	\$4,410	\$6,859	\$959	\$69,828
Valuation Assets	\$8,053	\$24,335	\$6,717	\$8,406	\$3,335	\$224	\$5,516	\$7,862	\$1,009	\$65,458
Unfunded Liability	\$4,831	(\$537)	\$2,732	(\$390)	(\$62)	(\$44)	(\$1,107)	(\$1,003)	(\$50)	\$4,370
Funded Ratio										
2013 **	63%	102%	71%	105%	102%	124%	125%	115%	105%	94%
2012	69%	111%	79%	114%	110%	134%	135%	119%	114%	101%
2011 **	71%	112%	81%	113%	110%	132%	135%	119%	115%	101%
2010 ***	74%	113%	84%	116%	113%	129%	127%	119%	118%	102%
2009 **	70%	116%	75%	118%	116%	128%	125%	128%	119%	99%
2008 **	71%	119%	77%	125%	121%	127%	128%	133%	121%	100%
2007 **	71%	120%	76%	130%	126%	120%	123%	129%	118%	99%
2006 **	74%	121%	80%	133%	125%	99%	117%	116%	114%	100%
2005 **	74%	127%	80%	134%	122%	N/A	114%	114%	113%	99%
2004	81%	134%	88%	153%	137%	N/A	109%	117%	118%	105%
2003	82%	142%	89%	155%	138%	N/A	112%	125%	123%	107%
2002	92%	158%	98%	182%	169%	N/A	119%	137%	135%	118%
2001 **	97%	179%	100%	197%	197%	N/A	129%	154%	147%	126%
2000 **	98%	190%	100%	196%	170%	N/A	136%	161%	152%	131%
1999	93%	189%	93%	188%	N/A	N/A	125%	154%	159%	124%
1998	86%	191%	86%	185%	N/A	N/A	117%	160%	147%	116%
1997 **	83%	187%	82%	181%	N/A	N/A	108%	155%	140%	109%
1996	73%	157%	70%	144%	N/A	N/A	89%	130%	128%	92%
1995	68%	150%	65%	136%	N/A	N/A	80%	126%	119%	85%
1994 **	67%	142%	65%	130%	N/A	N/A	68%	124%	110%	80%
1993	70%	142%	62%	126%	N/A	N/A	68%	127%	110%	79%
1992	67%	139%	59%	127%	N/A	N/A	65%	128%	108%	75%
1991	67%	149%	59%	131%	N/A	N/A	66%	154%	106%	75%
1990	66%	154%	60%	140%	N/A	N/A	65%	153%	105%	74%
1989 **	65%	162%	58%	144%	N/A	N/A	65%	158%	103%	73%
1988	66%	165%	59%	143%	N/A	N/A	66%	153%	102%	72%
1987	71%	175%	58%	135%	N/A	N/A	69%	157%	95%	74%
1986	63%	162%	50%	125%	N/A	N/A	57%	142%	87%	63%

Note: Totals may not agree due to rounding.

*Liabilities valued using the PUC cost method at an interest rate of 7.8% (7.5% for LEOFF 2). All assets have been valued under the actuarial asset method.

**Assumptions changed.

***LEOFF 2 values for 2010 were updated after the 2010 AVR was published.

The present value of actuarial liabilities is sensitive to the interest rate assumption. The tables to the right show how the funded status changes when we use different interest rate assumptions. We calculated liabilities using varying interest rates to show this sensitivity.

Funded Status at a 1% Lower Interest Rate Assumption*										
(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
PUC Liability	\$14,012	\$27,818	\$10,272	\$9,523	\$3,806	\$226	\$4,844	\$8,212	\$1,105	\$79,818
Valuation Assets	\$8,053	\$24,335	\$6,717	\$8,406	\$3,335	\$224	\$5,516	\$7,862	\$1,009	\$65,458
Unfunded Liability	\$5,959	\$3,484	\$3,555	\$1,117	\$471	\$2	(\$673)	\$349	\$96	\$14,360
Funded Ratio										
2013	57%	87%	65%	88%	88%	99%	114%	96%	91%	82%
2012	64%	96%	73%	97%	95%	108%	124%	100%	100%	89%
2011	65%	96%	75%	96%	95%	106%	123%	100%	100%	89%
2010**	68%	96%	78%	97%	96%	103%	116%	99%	102%	90%
2009	64%	99%	69%	99%	99%	102%	114%	107%	103%	87%
2008	65%	100%	70%	104%	103%	101%	117%	111%	105%	88%
2007	65%	101%	70%	108%	107%	95%	111%	107%	102%	87%

Note: Totals may not agree due to rounding.

*Liabilities valued using the PUC cost method at an interest rate of 6.8% (6.5% for LEOFF 2). All assets have been valued under the actuarial asset method.

**LEOFF 2 values for 2010 were updated after the 2010 AVR was published.

Funded Status at a 1% Higher Interest Rate Assumption*										
(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
PUC Liability	\$11,914	\$20,600	\$8,741	\$6,838	\$2,845	\$147	\$4,039	\$5,808	\$843	\$61,775
Valuation Assets	\$8,053	\$24,335	\$6,717	\$8,406	\$3,335	\$224	\$5,516	\$7,862	\$1,009	\$65,458
Unfunded Liability	\$3,861	(\$3,735)	\$2,023	(\$1,568)	(\$490)	(\$78)	(\$1,477)	(\$2,054)	(\$167)	(\$3,683)
Funded Ratio										
2013	68%	118%	77%	123%	117%	153%	137%	135%	120%	106%
2012	74%	128%	85%	133%	126%	162%	146%	140%	129%	113%
2011	76%	129%	87%	133%	127%	161%	146%	140%	130%	113%
2010**	80%	130%	91%	136%	130%	157%	139%	141%	133%	115%
2009	76%	135%	82%	140%	134%	158%	137%	152%	135%	112%
2008	77%	139%	84%	149%	141%	157%	141%	159%	137%	113%
2007	77%	141%	84%	155%	148%	149%	135%	154%	134%	112%

Note: Totals may not agree due to rounding.

*Liabilities valued using the PUC cost method at an interest rate of 8.8% (8.5% for LEOFF 2). All assets have been valued under the actuarial asset method.

**LEOFF 2 values for 2010 were updated after the 2010 AVR was published.

Funded Status on a Market Value Basis

We report funded status on a market value basis as the ratio of the MVA to the PUC liability calculated using a 5 percent interest rate assumption. The funded status on a market value basis provides a measure of the plan's health if the plan is "settled" or "immunized" on the valuation date. Immunizing a pension plan means attaching assets to liabilities so the assets maturing each year match the expected pension payments due from the pension plan each year. A plan can be settled by purchasing annuities on the open market for each member, or immunized by investing the assets in bonds with payment streams that match the expected benefit payments. Expected benefit payments would include growth for future salary inflation, which is why we have used the PUC liability measure instead of a purely accrued liability measure.

Because most of the Washington State plans covered in this valuation report are open and ongoing, we only present the market value

funded status for the closed Plans 1. Although the Plans 1 are closed to new members, they are not settled and have not been immunized. However, there is an opportunity to immunize these plans in the future. They are considered ongoing plans because current annuitants continue to receive their benefits from the retirement trust fund, and current active members continue to accrue benefits under the plan. However, because the plans are closed to new members, the future benefit payments are more predictable, have a shorter duration, and would be easier to immunize. The decision to settle or immunize the Plans 1 is complex and would require additional actuarial analysis and information that is outside the scope of this report.

The table below displays the market value funded status for each plan as described above.

Both funded status measures vary based on the measurement (valuation) date and the market conditions on that date. The market value measure, however, is more volatile because the asset value has no smoothing and the ability to immunize the plan depends on current bond and annuity purchase rates.

Funded Status on a Market Value Basis*			
(Dollars in Millions)	PERS	TRS	LEOFF
	Plan 1	Plan 1	Plan 1
Projected Unit Credit Liability	\$16,561	\$12,134	\$5,840
Market Value of Assets	7,347	6,127	5,140
Unfunded Liability	\$9,214	\$6,007	\$701
Funded Ratio			
2013	44%	50%	88%
2012	47%	54%	91%
2011	51%	58%	95%
2010	49%	56%	82%
2009	43%	46%	76%
2008	60%	65%	107%
2007	66%	70%	114%
2006	64%	67%	102%
2005	61%	63%	94%
2004	59%	60%	82%

Note: Totals may not agree due to rounding.

* Liabilities have been valued using an interest rate of 5% while assets are their market value. The 5% interest rate approximates the "risk-free" rate of return on assets while maintaining consistency with the 3% inflation assumption used to project future benefit payments. This method was not used to determine contribution requirements. Prior to 2011, liabilities were valued at 5.5%.

Actuarial Gains/Losses

The next three tables display actuarial gains and losses, expressed as contribution rate changes. Actuaries use gain/loss analysis to compare actual changes to assumed changes in assets, liabilities, and salaries from various sources. We also use this analysis to determine:

- ◆ The accuracy of our valuation model and annual processing.
- ◆ Why contribution rates changed.
- ◆ The reasonableness of the actuarial assumptions.

Actuarial gains will reduce contribution rates; actuarial losses will increase contribution rates. Under a reasonable set of actuarial assumptions, actuarial gains and losses will offset over long-term experience periods.

Change in Employer and State Contribution Rate by Source						
Change in Employer Rate	PERS	TRS	SERS*	PSERS*	LEOFF**	WSPRS
2012 Contribution Rate Before Laws of 2013	9.15%	10.68%	9.80%	10.28%	(8.79%)	7.76%
Remove Rate Floor / Ceiling	0.00%	(0.21%)	0.00%	0.00%	(0.74%)	(4.66%)
Remove Plan 1 Benefit Improvements After 2009	(0.14%)	(0.15%)	(0.14%)	(0.14%)	N/A	N/A
Remove Prior Liability and LEOFF 1 Funding Method Changes	(0.11%)	(0.77%)	(1.00%)	0.00%	0.34%	(1.32%)
2012 Adjusted Contribution Rate	8.90%	9.55%	8.66%	10.14%	(9.19%)	1.78%
Liability Gains/Losses	0.15%	0.29%	0.33%	0.32%	0.04%	0.70%
Asset Gains/Losses	0.73%	1.15%	0.45%	(0.02%)	0.89%	0.69%
Present Value of Future Salaries Gains/Losses	(0.48%)	(0.79%)	(0.43%)	(0.39%)	(0.40%)	(0.17%)
Incremental Changes	2.81%	3.41%	1.85%	0.86%	2.98%	4.51%
Other Gains/Losses	(0.07%)	(0.06%)	0.88%	1.02%	(0.20%)	(0.18%)
Total Change	3.14%	4.00%	3.08%	1.79%	3.31%	5.55%
2013 Preliminary Contribution Rate	12.04%	13.55%	11.74%	11.93%	(5.88%)	7.33%
Increase from Applied Rate Floor	0.00%	0.00%	0.00%	0.00%	0.40%	0.00%
Decrease from Applied Rate Ceiling	0.00%	0.00%	0.00%	0.00%	0.00%	N/A
Increase from Plan 1 Benefit Improvements After 2009	0.14%	0.15%	0.14%	0.14%	N/A	N/A
Rate to Amortize Prior Liability	0.11%	0.77%	1.00%	0.00%	0.00%	1.32%
Excess Member Rate	N/A	0.00%	N/A	N/A	N/A	0.14%
Laws of 2014	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013 Adjusted Contribution Rate	12.29%	14.47%	12.88%	12.07%	(5.48%)	8.79%

*The SERS and PSERS rates include the UAAL rate for PERS Plan 1. The "Other Gains/Losses" category includes the "Total Change" for the PERS 1 UAAL rate in those systems.

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

Change in Employer and State Plan 2/3 Normal Cost Rate by Source						
Change in Normal Costs	PERS	TRS	SERS	PSERS	LEOFF*	WSPRS**
2012 Normal Cost Before Laws of 2013	4.94%	5.72%	5.59%	6.07%	3.10%	7.76%
Remove Rate Floor / Ceiling	0.00%	(0.21%)	0.00%	0.00%	(0.74%)	(4.66%)
Remove Prior Employer Liability	(0.11%)	(0.77%)	(1.00%)	0.00%	0.00%	(1.32%)
2012 Adjusted Normal Cost Rate	4.83%	4.74%	4.59%	6.07%	2.36%	1.78%
Liabilities						
Salaries	(0.40%)	(0.49%)	(0.36%)	(0.28%)	(0.14%)	(0.58%)
Termination	(0.11%)	(0.26%)	(0.12%)	(0.07%)	0.00%	0.02%
Retirement	0.03%	0.05%	0.04%	0.00%	(0.01%)	(0.13%)
Growth / Return to Work	0.44%	0.89%	0.61%	0.69%	0.16%	0.65%
Other Liabilities	0.18%	0.10%	0.16%	(0.02%)	0.04%	0.74%
Total Liability Gains/Losses	0.14%	0.29%	0.33%	0.32%	0.05%	0.70%
Asset Gains/Losses	0.25%	0.26%	0.45%	(0.02%)	(0.02%)	0.69%
Present Value of Future Salaries Gains/Losses	(0.23%)	(0.39%)	(0.43%)	(0.39%)	(0.06%)	(0.17%)
Incremental Changes						
Plan Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Method Change	0.00%	0.00%	(0.02%)	0.00%	0.00%	0.00%
Assumption Change	0.38%	0.40%	0.41%	0.20%	0.00%	0.98%
Correction Change	0.00%	0.00%	0.00%	(0.02%)	0.00%	0.00%
Experience Study Change	1.67%	1.54%	1.46%	0.68%	0.43%	3.53%
Total Incremental Changes Gains/Losses	2.05%	1.94%	1.85%	0.86%	0.43%	4.51%
Other Gains/Losses	(0.04%)	(0.05%)	(0.09%)	0.05%	0.03%	(0.18%)
Total Change	2.17%	2.05%	2.11%	0.82%	0.43%	5.55%
2013 Preliminary Normal Cost	7.00%	6.79%	6.70%	6.89%	2.79%	7.33%
Increase from Applied Rate Floor	0.00%	0.00%	0.00%	0.00%	0.40%	0.00%
Rate to Amortize Prior Employer Liability	0.11%	0.77%	1.00%	0.00%	0.00%	1.32%
Excess Member Rate	N/A	0.00%	N/A	N/A	N/A	0.14%
Laws of 2014	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013 Adjusted Normal Cost	7.11%	7.56%	7.70%	6.89%	3.19%	8.79%

*The LEOFF contribution rate is the state's portion only (20% of the Plan 2 Normal Cost).

**The WSPRS normal cost contribution rate applies to Plans 1 and 2.

Change in Employer and State Plan 1 UAAL Rate by Source						
Change in UAAL Rate	PERS	TRS	SERS*	PSERS*	LEOFF**	WSPRS
2012 UAAL Rate Before Laws of 2013	4.21%	4.96%	4.21%	4.21%	(11.89%)	N/A
Remove Rate Floor / Ceiling	0.00%	0.00%	0.00%	0.00%	0.00%	N/A
Remove Plan 1 Benefit Improvements After 2009	(0.14%)	(0.15%)	(0.14%)	(0.14%)	N/A	N/A
LEOFF 1 Roll Forward Funding Method	N/A	N/A	N/A	N/A	0.34%	N/A
2012 Adjusted UAAL Rate	4.07%	4.81%	4.07%	4.07%	(11.55%)	N/A
Liabilities						
Salaries	(0.03%)	(0.06%)	N/A	N/A	(0.03%)	N/A
Termination	0.00%	0.00%	N/A	N/A	0.00%	N/A
Retirement	(0.01%)	(0.03%)	N/A	N/A	(0.02%)	N/A
Return to Work	0.00%	0.00%	N/A	N/A	0.00%	N/A
Inflation (CPI)	0.00%	0.00%	N/A	N/A	(0.14%)	N/A
Other Liabilities	0.05%	0.09%	N/A	N/A	0.18%	N/A
Total Liability Gains/Losses	0.01%	0.00%	N/A	N/A	(0.01%)	N/A
Asset Gains/Losses	0.48%	0.89%	N/A	N/A	0.91%	N/A
Present Value of Future Salaries Gains/Losses	(0.25%)	(0.40%)	N/A	N/A	(0.34%)	N/A
Incremental Changes						
Plan Change	0.00%	0.00%	N/A	N/A	0.00%	N/A
Method Change	0.01%	0.00%	N/A	N/A	0.00%	N/A
Assumption Change	0.08%	0.16%	N/A	N/A	0.29%	N/A
Correction Change	0.00%	0.02%	N/A	N/A	0.00%	N/A
Experience Study Change	0.67%	1.29%	N/A	N/A	2.26%	N/A
Total Incremental Changes Gains/Losses	0.76%	1.47%	N/A	N/A	2.55%	N/A
Other Gains/Losses	(0.03%)	(0.01%)	N/A	N/A	(0.23%)	N/A
Total Change	0.97%	1.95%	0.97%	0.97%	2.88%	N/A
2013 Preliminary UAAL Rate	5.04%	6.76%	5.04%	5.04%	(8.67%)	N/A
Increase from Applied Rate Floor	0.00%	0.00%	0.00%	0.00%	N/A	N/A
Decrease from Applied Rate Ceiling	0.00%	0.00%	0.00%	0.00%	0.00%	N/A
Increase from Plan 1 Benefit Improvements After 2009	0.14%	0.15%	0.14%	0.14%	N/A	N/A
Laws of 2014	0.00%	0.00%	0.00%	0.00%	0.00%	N/A
2013 Adjusted UAAL Rate	5.18%	6.91%	5.18%	5.18%	(8.67%)	N/A

*The SERS and PSERS rates are to fund the PERS Plan 1 UAAL.

**The LEOFF contribution rate is the UAAL rate for plan 1. The plan has a surplus of assets over liabilities, so no rate is currently payable.

Effect of Plan, Assumption, and Method Changes

In addition to experience gains or losses, changes in plan provisions or actuarial assumptions or methods can also impact contribution rates.

Plan Changes

- ◆ None.

Assumption Changes

- ◆ For all systems, except LEOFF 2, we lowered the assumed long-term rate of return from 7.9 to 7.8 percent.
- ◆ We updated assumed administrative factors.
- ◆ We updated demographic assumptions as a result of the *2007-2012 Experience Study*.

Method Changes

- ◆ We changed the structure of PSERS termination benefits within our valuation software.
- ◆ We changed how we value survivor-beneficiary benefits under the Basic Minimum COLA in PERS 1 and TRS 1.

Other Changes

- ◆ None.

Effect of Changes on the Current Valuation

The table below shows the effect of the above changes on the current actuarial valuation results.

Effect of Plan, Assumption, and Method Changes									
	PERS 1	PERS 2/3	TRS 1	TRS 2/3	SERS 2/3	PSERS 2	LEOFF 1	LEOFF 2*	WSPRS
Before Changes									
PVFB	\$12,269	\$30,635	\$8,901	\$11,036	\$4,173	\$539	\$4,092	\$9,814	\$1,064
PUC Liability	12,148	22,139	8,862	7,440	3,080	167	4,083	6,655	904
Actuarial Value of Assets	8,053	24,335	6,717	8,406	3,335	224	5,516	7,862	1,009
Unfunded Liability	4,095	(2,196)	2,145	(966)	(255)	(57)	(1,433)	(1,208)	(106)
Employer Contribution Rate	9.47%	9.47%	11.14%	11.14%	10.21%	10.37%	0.00%	4.64%	7.70%
After Changes									
PVFB	\$13,012	\$33,404	\$9,491	\$12,025	\$4,495	\$595	\$4,420	\$10,314	\$1,132
PUC Liability	12,884	23,798	9,449	8,016	3,273	\$180	4,410	6,859	959
Actuarial Value of Assets	8,053	24,335	6,717	8,406	3,335	\$224	5,516	7,862	1,009
Unfunded Liability	4,831	(537)	2,732	(390)	(62)	(\$44)	(1,107)	(1,003)	(50)
Employer Contribution Rate	12.29%	12.29%	14.47%	14.47%	12.88%	12.07%	0.00%	4.78%	8.79%
Increase / (Decrease) in Rate	2.82%	2.82%	3.33%	3.33%	2.67%	1.70%	0.00%	0.14%	1.09%

Before and after changes include actuarial gains and losses for the year ending 6/30/2013.

Both before and after contribution rates include rate minimums and maximums.

*The LEOFF Plan 2 contribution rate is the employer's portion only (30% of the Plan 2 Normal Cost)

3

Participant Data



Overview of System Membership

The state administers nine retirement systems for state and local public employees. Retirement system membership is determined according to the participant's occupation and employer. Employees covered by each system are defined in separate chapters of the Revised Code of Washington.

In addition to the six systems described below, the state also administers benefits for volunteer fire fighters and two small judicial systems, which

are not included in this valuation. The volunteer fire fighters have a separate actuarial valuation. The judicial systems are closed to new members, and any judge hired after June 30, 1988, becomes a member of the Public Employees' Retirement System Plans 2/3.

Beginning with the 2015 valuation period, OSA will also perform valuations for certain retirement provisions under Higher Education Retirement Plans. These plans are offered to

certain employees of colleges and universities in Washington and are not administered by the Department of Retirement Systems. The results of these valuations will be provided in separate reports.

PERS - Public Employees' Retirement System <i>Chapter 41.40 RCW</i>	State employees; employees of all counties and most cities (some exceptions are Tacoma, Seattle, and Spokane); non-teaching employees of institutions of higher learning and community colleges; employees of ports, service districts, Energy Northwest, public utility districts, and judges first elected or appointed after June 30, 1988.
TRS - Teachers' Retirement System <i>Chapter 41.32 RCW</i>	Certificated teachers; administrators; and educational staff associates.
SERS - School Employees' Retirement System <i>Chapter 41.35 RCW</i>	Classified school district employees.
PSERS - Public Safety Employees' Retirement System <i>Chapter 41.37 RCW</i>	Correction officers (state, state community, county, city, and local community); state park rangers; enforcement officers with the Liquor Control Board, Washington State Patrol (commercial vehicle), Gambling Commission, and the Department of Natural Resources.
LEOFF - Law Enforcement Officers' and Fire Fighters' Retirement System <i>Chapter 41.26 RCW</i>	Fire fighters; emergency medical technicians; law enforcement officers including sheriffs; university, port, city police officers, and enforcement officers with the Department of Fish and Wildlife.
WSPRS - Washington State Patrol Retirement System <i>Chapter 43.43 RCW</i>	Commissioned officers of the Washington State Patrol.

Active Membership By Employer and Plan							
Employer	All	PERS			TRS		
	Systems	Plan 1	Plan 2	Plan 3	Plan 1	Plan 2	Plan 3
State Agencies	58,372	1,811	41,932	10,887	21	27	43
Higher Education	21,228	581	13,997	6,432	19	7	82
Community Colleges	5,959	175	4,210	1,322	50	32	170
K-12	117,219	1,336	0	0	2,292	11,922	50,965
Counties	34,263	857	24,228	4,605	0	0	0
County Sub Divisions	12,397	269	9,770	2,064	0	0	0
First Class Cities	8,156	96	2,487	581	0	0	0
Other Cities	17,492	298	10,279	1,829	0	0	0
Ports	2,380	45	1,833	329	0	0	0
Education Service District	1,930	34	0	0	11	83	211
Fire Districts	4,295	7	667	91	0	0	0
Public Utility District	4,571	89	3,896	586	0	0	0
Water Districts	1,886	44	1,628	214	0	0	0
Energy Northwest	1,192	6	824	362	0	0	0
Unions	5	5	0	0	0	0	0
TOTAL	291,345	5,653	115,751	29,302	2,393	12,071	51,471

Active Membership By Employer and Plan (Continued)							
Employer	SERS		PSERS	LEOFF		WSPRS	
	Plan 2	Plan 3	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2
State Agencies	0	0	2,461	0	124	657	409
Higher Education	0	0	0	0	110	0	0
Community Colleges	0	0	0	0	0	0	0
K-12	21,020	29,684	0	0	0	0	0
Counties	0	0	1,803	17	2,753	0	0
County Sub Divisions	0	0	81	2	211	0	0
First Class Cities	0	0	26	76	4,890	0	0
Other Cities	0	0	142	33	4,911	0	0
Ports	0	0	0	0	173	0	0
Education Service District	740	851	0	0	0	0	0
Fire Districts	0	0	0	15	3,515	0	0
Public Utility District	0	0	0	0	0	0	0
Water Districts	0	0	0	0	0	0	0
Energy Northwest	0	0	0	0	0	0	0
Unions	0	0	0	0	0	0	0
TOTAL	21,760	30,535	4,513	143	16,687	657	409

The following tables show participant data changes from last year's valuation to this year's valuation. We divide the participant data into two main categories:

- ◆ **Actives** — members accruing benefits in the plan.
- ◆ **Annuitants** — members and beneficiaries receiving benefits from the plan.

Reconciliation of Participant Data								
	PERS				TRS			
	Plan 1	Plan 2	Plan 3	Total	Plan 1	Plan 2	Plan 3	Total
2012 Actives	6,635	115,877	28,078	150,590	3,019	10,849	51,489	65,357
Transfers	0	(136)	3,950	3,814	0	(17)	1,737	1,720
Hires/Rehires	112	10,045	738	10,895	21	2,189	1,461	3,671
New Retirees	(940)	(2,584)	(238)	(3,762)	(614)	(228)	(575)	(1,417)
Deaths	(22)	(218)	(29)	(269)	(8)	(8)	(34)	(50)
Terminations	(132)	(7,233)	(3,197)	(10,562)	(25)	(714)	(2,607)	(3,346)
2013 Actives	5,653	115,751	29,302	150,706	2,393	12,071	51,471	65,935
2012 Annuitants	52,672	27,820	1,750	82,242	36,054	3,060	3,804	42,918
New Retirees	1,226	3,902	387	5,515	721	412	1,045	2,178
Annuitant Deaths	(2,391)	(649)	(23)	(3,063)	(1,019)	(36)	(24)	(1,079)
New Survivors	370	265	27	662	168	10	38	216
Other	(17)	(9)	(2)	(28)	(12)	(1)	0	(13)
2013 Annuitants	51,860	31,329	2,139	85,328	35,912	3,445	4,863	44,220
Ratio Actives to Annuitants	0.11	3.69	13.70	1.77	0.07	3.50	10.58	1.49

Reconciliation of Participant Data (Continued)											
	SERS			PSERS		LEOFF		WSPRS			All Systems
	Plan 2	Plan 3	Total	Plan 2	Plan 1	Plan 2	Total	Plan 1	Plan 2	Total	
2012 Actives	20,846	30,712	51,558	4,250	186	16,720	16,906	712	354	1,066	289,727
Transfers	(46)	2,048	2,002	0	0	0	0	0	0	0	7,536
Hires/Rehires	2,959	649	3,608	596	0	612	612	1	62	63	19,445
New Retirees	(446)	(481)	(927)	(13)	(42)	(366)	(408)	(54)	0	(54)	(6,581)
Deaths	(36)	(35)	(71)	(2)	0	(11)	(11)	(1)	0	(1)	(404)
Terminations	(1,517)	(2,358)	(3,875)	(318)	(1)	(268)	(269)	(1)	(7)	(8)	(18,378)
2013 Actives	21,760	30,535	52,295	4,513	143	16,687	16,830	657	409	1,066	291,345
2012 Annuitants	4,437	3,214	7,651	27	7,845	2,344	10,189	915	0	915	143,942
New Retirees	691	785	1,476	16	42	441	483	55	0	55	9,723
Annuitant Deaths	(82)	(22)	(104)	0	(261)	(16)	(277)	(18)	0	(18)	(4,541)
New Survivors	38	18	56	0	104	16	120	12	0	12	1,066
Other	0	0	0	0	(1)	(3)	(4)	0	0	0	(45)
2013 Annuitants	5,084	3,995	9,079	43	7,729	2,782	10,511	964	0	964	150,145
Ratio Actives to Annuitants	4.28	7.64	5.76	104.95	0.02	6.00	1.60	0.68	N/A	1.11	1.94

Summary of Plan Participants

Summary of Plan Participants								
PERS	2013				2012			
	Plan 1	Plan 2	Plan 3	Total	Plan 1	Plan 2	Plan 3	Total
Active Members								
Number	5,653	115,751	29,302	150,706	6,635	115,877	28,078	150,590
Total Salaries (millions)	\$318	\$6,759	\$1,581	\$8,657	\$371	\$6,688	\$1,504	\$8,563
Average Age	62.2	48.4	43.6	48.0	61.5	48.4	43.5	48.1
Average Service	24.5	12.6	8.7	12.3	24.1	12.5	8.7	12.3
Average Salary	\$56,224	\$58,388	\$53,948	\$57,444	\$55,878	\$57,718	\$53,579	\$56,865
Terminated Members								
Number Vested	1,384	25,383	4,280	31,047	1,594	24,953	3,968	30,515
Number "Non-Vested"	3,810	97,381	0	101,191	4,042	95,834	0	99,876
Retirees (including L&I disabled)								
Number of Retirees (All)	51,860	31,329	2,139	85,328	52,672	27,820	1,750	82,242
Average Monthly Benefit, All Retirees	\$1,892	\$1,256	\$723	\$1,629	\$1,850	\$1,158	\$675	\$1,591
Number of New "Service Retirees"	1,209	3,782	375	5,366	1,289	3,314	347	4,950
Avg. Monthly Benefit, New "Service Retirees"	\$2,350	\$1,731	\$896	\$1,812	\$2,361	\$1,618	\$877	\$1,760

Summary of Plan Participants									
<i>(Continued)</i>									
TRS	2013				2012				
	Plan 1	Plan 2	Plan 3	Total	Plan 1	Plan 2	Plan 3	Total	
Active Members									
Number	2,393	12,071	51,471	65,935	3,019	10,849	51,489	65,357	
Total Salaries (millions)	\$183	\$740	\$3,483	\$4,406	\$229	\$669	\$3,408	\$4,305	
Average Age	63.0	44.5	46.1	46.4	62.3	45.7	45.7	46.5	
Average Service	30.1	10.1	13.7	13.6	29.3	11.0	13.3	13.7	
Average Salary	\$76,549	\$61,320	\$67,664	\$66,825	\$75,681	\$61,648	\$66,191	\$65,875	
Terminated Members									
Number Vested	391	2,330	7,102	9,823	477	2,348	6,720	9,545	
Number "Non-Vested"	453	4,812	0	5,265	505	4,626	0	5,131	
Temporarily Disabled	0	0	0	0	0	0	0	0	
Retirees									
Number of Retirees (All)	35,912	3,445	4,863	44,220	36,054	3,060	3,804	42,918	
Average Monthly Benefit, All Retirees	\$2,060	\$1,612	\$903	\$1,898	\$2,028	\$1,516	\$837	\$1,886	
Number of New "Service Retirees"	717	409	1,028	2,154	841	409	843	2,093	
Avg. Monthly Benefit, New "Service Retirees"	\$2,973	\$2,014	\$1,098	\$1,896	\$2,885	\$1,858	\$1,023	\$1,935	

Summary of Plan Participants (Continued)						
SERS	2013			2012		
	Plan 2	Plan 3	Total	Plan 2	Plan 3	Total
Active Members						
Number	21,760	30,535	52,295	20,846	30,712	51,558
Total Salaries (millions)	\$623	\$892	\$1,514	\$594	\$885	\$1,479
Average Age	51.1	50.6	50.8	51.3	50.4	50.8
Average Service	10.8	10.7	10.7	11.1	10.5	10.7
Average Salary	\$28,620	\$29,195	\$28,956	\$28,494	\$28,810	\$28,682
Terminated Members						
Number Vested	5,190	6,398	11,588	4,992	5,928	10,920
Number "Non-Vested"	8,861	0	8,861	8,143	0	8,143
Retirees						
Number of Retirees (All)	5,084	3,995	9,079	4,437	3,214	7,651
Average Monthly Benefit, All Retirees	\$780	\$410	\$617	\$738	\$389	\$591
Number of New "Service Retirees"	669	770	1,439	627	607	1,234
Average Monthly Benefit, New "Service Retirees"	\$942	\$466	\$687	\$914	\$442	\$682

Summary of Plan Participants (Continued)		
PSERS	2013	2012
	Plan 2	Plan 2
Active Members		
Number	4,513	4,250
Total Salaries (millions)	\$253	\$238
Average Age	40.4	40.1
Average Service	4.8	4.3
Average Salary	\$56,075	\$55,999
Terminated Members		
Number Vested	119	60
Number "Non-Vested"	1,383	1,329
Retirees		
Number of Retirees (All)	43	27
Average Monthly Benefit, All Retirees	\$358	\$264
Number of New "Service Retirees"	16	9
Average Monthly Benefit, New "Service Retirees"	\$511	\$340

Summary of Plan Participants (Continued)						
LEOFF	2013			2012		
	Plan 1	Plan 2	Total	Plan 1	Plan 2	Total
Active Members						
Number	143	16,687	16,830	186	16,720	16,906
Total Salaries (millions)	\$15	\$1,597	\$1,612	\$19	\$1,560	\$1,579
Average Age	61.9	43.5	43.7	60.9	43.2	43.4
Average Service	38.2	14.6	14.8	37.1	14.3	14.6
Average Salary	\$103,362	\$95,694	\$95,759	\$100,828	\$93,308	\$93,391
Terminated Members						
Number Vested	1	698	699	0	689	689
Number "Non-Vested"	35	1,565	1,600	41	1,558	1,599
Retirees						
Number of Retirees (All)	7,729	2,782	10,511	7,845	2,344	10,189
Average Monthly Benefit, All Retirees	\$3,841	\$3,151	\$3,658	\$3,720	\$2,911	\$3,534
Number of New "Service Retirees"**	42	402	444	63	323	386
Average Monthly Benefit, New "Service Retirees"**	\$7,106	\$4,091	\$4,376	\$6,777	\$3,970	\$4,428

*Includes disabled retirees for Plan 1 only.

Summary of Plan Participants (Continued)						
WSPRS	2013			2012		
	Plan 1	Plan 2	Total	Plan 1	Plan 2	Total
Active Members						
Number	657	409	1,066	712	354	1,066
Total Salaries (millions)	\$54	\$27	\$80	\$57	\$23	\$80
Average Age	45.6	32.5	40.6	45.2	32.5	41.0
Average Service	18.9	5.7	13.8	18.5	5.5	14.2
Average Salary	\$81,465	\$65,058	\$75,170	\$80,263	\$65,165	\$75,249
Terminated Members						
Number Vested	70	10	80	71	8	79
Number "Non-Vested"	18	14	32	18	13	31
Disabled Members*	49	0	49	49	0	49
Retirees						
Number of Retirees (All)	964	0	964	915	0	915
Average Monthly Benefit, All Retirees	\$3,881	\$0	\$3,881	\$3,748	\$0	\$3,748
Number of New "Service Retirees"	55	0	55	47	0	47
Average Monthly Benefit, New "Service Retirees"	\$4,194	\$0	\$4,194	\$3,949	\$0	\$3,949

*Benefits provided outside of pension funds.

4 Appendices



Actuarial Methods and Assumptions

To calculate the contribution rates necessary to pre-fund the plan's benefits, an actuary uses an actuarial cost method, asset valuation method, economic assumptions, and demographic assumptions.

Actuarial Cost Methods

The future benefit obligations (or costs of the plan) are spread over the working lifetimes of the plan members based on the actuarial cost method (or funding method) in place for the plan. This produces a future stream of contributions to pre-fund the plan's benefits. Different cost methods pre-fund plans at different rates. Some put more money in earlier whereas others put more money in later.

Actuarial cost methods generally have two parts, which serve to:

- ◆ Fund future benefits in a consistent manner from year to year.
- ◆ Make up for any shortfalls in prior funding, including differences in funding when experience differs from assumptions.

The two parts of an actuarial cost method are:

- ◆ **The Normal Cost** – the value of future benefits allocated to the current plan year under the actuarial cost method.
- ◆ **Amortization of the Unfunded Actuarial Accrued Liability (UAAL)** – where the UAAL represents the amount of past service liability that exceeds the value of the plan's assets.

The Legislature was responsible for the selection of the actuarial cost and asset valuation methods. The actuarial cost methods for the Washington State retirement systems are as follows.

Public Employees' Retirement System (PERS) Plan 1 and Teachers' Retirement System (TRS) Plan 1:

We use a variation of the Entry Age Normal Cost Method (EANC) to determine the actuarial accrued liability. Under this method, the UAAL is equal to the unfunded actuarial present value of projected benefits less the actuarial present value of future normal costs for all active members and is reset at each valuation date. The present value of future normal costs is based on the Aggregate Normal Cost rate for Plans 2/3 and the resulting UAAL is amortized over a rolling ten-year period, as a level percentage of projected system payroll. The projected payroll includes pay from Plan 2 and Plan 3 as well as projected payroll from future new entrants.

As a result of this hybrid method, employers are charged the same contribution rate, regardless of the plan in which employees hold membership.

The method is subject to maximum contribution rates prior to 2015 and minimum contribution rates thereafter.

Law Enforcement Officers' and Fire Fighters' (LEOFF) Plan 1: A variation of the Frozen Initial Liability Cost Method is used to determine the normal cost and the actuarial accrued liability for retirement, termination, and ancillary benefits. Under this method, the UAAL is equal to the unfunded actuarial present value of projected benefits less the actuarial present value of future normal costs for all active members and is reset at each valuation date. The present value of future normal costs is based on the Aggregate normal cost rate for Plan 2 and the resulting UAAL is amortized by June 30, 2024, as a level percentage of projected system payroll. The projected payroll includes pay from Plan 2 as well as projected payroll from future new entrants.

Plans 2 and Plans 3: We use the Aggregate Cost Method to determine the normal cost and the actuarial accrued liability. Under this method, the unfunded actuarial present value of fully projected benefits is amortized over the future payroll of the active group. Plan 2 members pay 50 percent of the normal cost. The entire contribution is considered normal cost and no UAAL exists.

For TRS Plan 2, the maximum employee contribution rate is 6.59 percent plus 50 percent of the contribution rate increases from benefit improvements effective on or after July 1, 1996. The

employer picks up any employee cost sharing that exceeds the employee rate maximum. Please see the **Actuarial Exhibits** section for a table showing the current TRS Plan 2 maximum member contribution rates.

Washington State Patrol

Retirement System (WSPRS): We use the Aggregate Cost Method to determine the normal cost and the actuarial accrued liability. The entire normal cost is divided equally between the employee and the employer. The maximum employee contribution rate is 7 percent plus 50 percent of the contribution rate increases from benefit improvements effective on or after July 1, 2007. The employer picks up any employee cost sharing that exceeds the employee rate maximum. Please see the **Actuarial Exhibits** section for a table showing the current WSPRS Plans 1/2 maximum member contribution rates.

In this valuation, we use the Projected Unit Credit (PUC) cost method to report the plan's funded status. The PUC cost method projects future benefits under the plan, using salary growth and other assumptions, and applies the service that has been earned as of the valuation date to determine accrued liabilities. Comparing the PUC liabilities to the actuarial value of assets on the valuation date provides an appropriate measure of a plan's funded status. Under current Governmental Accounting Standards Board (GASB) rules, the PUC method is one of several acceptable measures of a plan's funded status. Use of another cost method could also be considered appropriate and could produce materially different results.

Please see the [Glossary](#) for a further explanation of the PUC cost method.

GASB Statements 67 and 68 become effective after June 15, 2015, replace the current GASB Statements, and require use of the EANC for accounting purposes. We will begin reporting the EANC funded status with the next actuarial valuation report, as of June 30, 2014.

We use the plan's assets to calculate contribution rates, unfunded liabilities, and the plan's funded status. Because the market value of assets can be volatile from one year to the next, an asset valuation method is generally used to adjust the market value of assets and smooth the effects of short-term volatility. The adjusted assets are called the actuarial value of assets, or valuation assets.

For this valuation, we calculate the Actuarial Value of Assets (AVA) using an asset smoothing method. This smoothing method was adopted during the 2003 Legislative Session. Each year, beginning with the application of this smoothing method, we determine the amount the actual investment return exceeds (or falls below) the expected investment return and we smooth that year's gain (or loss) based on the scale in the table below.

Additionally, to ensure the AVA maintains a reasonable relationship to the Market Value of Assets (MVA), a 30 percent corridor is in place. This means the AVA may not exceed 130 percent nor drop below 70 percent of the MVA in any valuation.

Annual Gain/Loss			
Rate of Return, LEOFF 2	Rate of Return, All Other Plans	Smoothing Period	Annual Recognition
14.5% and up	14.9% and up	8 years	12.50%
13.5-14.5%	13.9-14.9%	7 years	14.29%
12.5-13.5%	12.9-13.9%	6 years	16.67%
11.5-12.5%	11.9-12.9%	5 years	20.00%
10.5-11.5%	10.9-11.9%	4 years	25.00%
9.5-10.5%	9.9-10.9%	3 years	33.33%
8.5-9.5%	8.9-9.9%	2 years	50.00%
6.5-8.5%	6.9-8.9%	1 year	100.00%
5.5-6.5%	5.9-6.9%	2 years	50.00%
4.5-5.5%	4.9-5.9%	3 years	33.33%
3.5-4.5%	3.9-4.9%	4 years	25.00%
2.5-3.5%	2.9-3.9%	5 years	20.00%
1.5-2.5%	1.9-2.9%	6 years	16.67%
0.5-1.5%	0.9-1.9%	7 years	14.29%
0.5% and lower	0.9% and lower	8 years	12.50%

Economic Assumptions

These generally include the annual rate of return on plan assets, annual rate of inflation, and annual rate of salary growth. The economic assumptions used in this actuarial valuation are

prescribed by the Legislature, the PFC, and the LEOFF Plan 2 Retirement Board, and are shown in the following table.

Economic Assumptions							
By System	PERS	TRS	SERS	PSERS	LEOFF	WSPRS	
Annual Growth in Membership	0.95%	0.80%	0.95%	0.95%	1.25%	0.95%	
Interest on Member Contributions ¹	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	
Return on Investment Earnings ²	7.80%	7.80%	7.80%	7.80%	7.80%	7.80%	
Inflation ³	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	
General Salary Increases (includes inflation) ⁴	3.75%	3.75%	3.75%	3.75%	3.75%	3.75%	
Annual COLA	Plan 1:	Minimum COLA ⁵	Minimum COLA ⁵	N/A	N/A	3.00% ⁶	3.00% ⁷
	Plan 2/3:	3.00% ⁷	3.00% ⁷	3.00% ⁷	3.00% ⁷	3.00% ⁷	3.00% ⁷

¹ Annual rate, compounded quarterly except for WSPRS, which is compounded monthly. This rate is set by the director of the Department of Retirement Systems.

² Effective for contribution rates beginning July 1, 2015. The rate is 7.50% in LEOFF 2. Annual rate, compounded annually.

³ Based on the CPI: Urban Wage Earners & Clerical Workers, Seattle-Tacoma-Bremerton, WA - All Items.

⁴ Excludes longevity, merit or step increases that usually apply to members in the early part of their careers.

⁵ The increase was \$2.12 per month per year of service on 7/1/2014. Payable to qualified members. The Uniform COLA was removed under C 362 L 2011.

⁶ Equal to the CPI.

⁷ Based on the CPI (3% maximum per year).

We adjust the general salary assumption for TRS each year to model the salary bonus payable to members who attain national board certification. These bonuses are includable in compensation for pension purposes.

TRS General Salary Increase by Year		
Year	TRS 1	TRS 2/3
2013	3.80%	3.80%
2014	3.85%	3.85%
2015	3.77%	3.77%
2016	3.75%	3.75%
2017	3.75%	3.75%
2018	3.85%	3.85%
2019	3.84%	3.84%
2020	3.83%	3.83%
2021	3.83%	3.82%
2022	3.82%	3.82%
2023	3.81%	3.81%
2024	3.80%	3.80%
2025	3.79%	3.79%
2026	3.78%	3.78%
2027	3.77%	3.77%
2028	3.77%	3.77%
2029+	3.75%	3.75%

Includes inflation.

Demographic Assumptions

These include rates of retirement, rates at which members become disabled, turnover rates, mortality rates, and several other demographic assumptions as disclosed later in this section.

Changes in Methods and Assumptions Since the Last Valuation

◆ We changed the structure of PSERS termination benefits within our valuation software. We corrected the retirement age for terminated vested benefits to reflect eligibility based on PSERS service.

◆ We changed how we value survivor-beneficiary benefits under the Basic Minimum Cost Of Living Adjustment (COLA) for PERS 1 and TRS 1. We assume beneficiaries will receive 100 percent of the Basic Minimum COLA, regardless of the Joint and Survivor option selected by the member.

◆ For all systems, except LEOFF 2, we assume a 7.8 percent interest rate.

◆ We updated assumed administrative factors consistent with those currently in use by the Department of Retirement Systems.

◆ We performed an experience study of the plans for the period 2007-2012. As a result of this study, we updated demographic assumptions. For a full description of the assumption changes see the [2007-2012 Experience Study](#).

Step Salary Increases by System												
Service Years	PERS		TRS		SERS		PSERS		LEOFF		WSPRS	
	% Increase	Salary Ratio										
0	6.00%	1.367	5.10%	1.573	6.60%	1.382	6.00%	1.367	10.70%	1.827	8.50%	1.642
1	6.00%	1.290	5.10%	1.496	6.60%	1.297	6.00%	1.290	10.70%	1.650	8.50%	1.513
2	4.70%	1.217	3.90%	1.424	3.90%	1.217	4.70%	1.217	7.50%	1.491	6.00%	1.395
3	3.60%	1.162	3.90%	1.370	2.80%	1.171	3.60%	1.162	5.90%	1.387	5.00%	1.316
4	2.90%	1.122	3.50%	1.319	2.30%	1.139	2.90%	1.122	3.70%	1.310	5.00%	1.253
5	2.20%	1.090	3.00%	1.274	2.10%	1.113	2.20%	1.090	2.60%	1.263	5.00%	1.194
6	1.50%	1.067	2.70%	1.237	1.60%	1.090	1.50%	1.067	1.80%	1.231	3.50%	1.137
7	1.20%	1.051	2.70%	1.205	1.20%	1.073	1.20%	1.051	1.40%	1.209	0.60%	1.098
8	0.90%	1.039	2.60%	1.173	1.20%	1.061	0.90%	1.039	1.30%	1.192	0.60%	1.092
9	0.70%	1.029	2.40%	1.143	0.90%	1.048	0.70%	1.029	1.20%	1.177	0.60%	1.085
10	0.50%	1.022	2.20%	1.116	0.90%	1.039	0.50%	1.022	1.70%	1.163	0.60%	1.079
11	0.40%	1.017	2.00%	1.092	0.70%	1.029	0.40%	1.017	1.20%	1.144	0.60%	1.072
12	0.30%	1.013	1.80%	1.071	0.50%	1.022	0.30%	1.013	1.20%	1.130	0.40%	1.066
13	0.30%	1.010	1.50%	1.052	0.40%	1.017	0.30%	1.010	1.20%	1.117	0.40%	1.062
14	0.20%	1.007	1.20%	1.037	0.30%	1.013	0.20%	1.007	1.20%	1.104	0.40%	1.057
15	0.20%	1.005	0.90%	1.024	0.20%	1.010	0.20%	1.005	1.20%	1.090	0.40%	1.053
16	0.20%	1.003	0.50%	1.015	0.20%	1.008	0.20%	1.003	1.00%	1.078	0.40%	1.049
17	0.10%	1.001	0.20%	1.010	0.20%	1.006	0.10%	1.001	1.00%	1.067	0.40%	1.045
18	0.00%	1.000	0.10%	1.008	0.20%	1.004	0.00%	1.000	1.00%	1.056	0.40%	1.041
19	0.00%	1.000	0.10%	1.007	0.10%	1.002	0.00%	1.000	1.00%	1.046	0.40%	1.037
20	0.00%	1.000	0.10%	1.006	0.10%	1.001	0.00%	1.000	1.00%	1.036	0.40%	1.032
21	0.00%	1.000	0.10%	1.005	0.00%	1.000	0.00%	1.000	0.50%	1.025	0.40%	1.028
22	0.00%	1.000	0.10%	1.004	0.00%	1.000	0.00%	1.000	0.50%	1.020	0.40%	1.024
23	0.00%	1.000	0.10%	1.003	0.00%	1.000	0.00%	1.000	0.50%	1.015	0.40%	1.020
24	0.00%	1.000	0.10%	1.002	0.00%	1.000	0.00%	1.000	0.50%	1.010	0.40%	1.016
25	0.00%	1.000	0.10%	1.001	0.00%	1.000	0.00%	1.000	0.50%	1.005	0.40%	1.012
26	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.40%	1.008
27	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.40%	1.004
28	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000
29	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000
30+	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000	0.00%	1.000

Probability of Service Retirement (Hired before 5/1/2013)															
Age	TRS										SERS				
	Plan 1				Plan 2/3						Plan 2/3				
	Service not equal to 30 years		Service equal to 30 years		Service less than 30 years		Service equal to 30 years		Service greater than 30 years		Service less than 30 years		Service greater than or equal to 30 years		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	0.00	0.20	0.36	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	0.22	0.20	0.36	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	0.22	0.20	0.36	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.22	0.20	0.36	0.30	0.02	0.02	0.22	0.19	0.13	0.12	0.01	0.02	0.12	0.12	0.12
56	0.22	0.20	0.36	0.30	0.02	0.03	0.22	0.21	0.15	0.14	0.02	0.02	0.12	0.12	0.12
57	0.22	0.20	0.36	0.30	0.02	0.04	0.22	0.23	0.17	0.16	0.03	0.02	0.12	0.12	0.12
58	0.22	0.20	0.39	0.30	0.02	0.05	0.28	0.25	0.19	0.18	0.04	0.03	0.12	0.12	0.12
59	0.22	0.26	0.42	0.30	0.04	0.06	0.34	0.27	0.21	0.22	0.05	0.04	0.16	0.25	0.25
60	0.22	0.20	0.42	0.30	0.06	0.07	0.41	0.29	0.23	0.20	0.06	0.05	0.12	0.12	0.12
61	0.22	0.23	0.42	0.40	0.14	0.15	0.48	0.41	0.25	0.22	0.15	0.13	0.21	0.20	0.20
62	0.35	0.26	0.56	0.50	0.22	0.23	0.55	0.53	0.36	0.32	0.24	0.21	0.30	0.28	0.28
63	0.30	0.22	0.48	0.46	0.20	0.21	0.50	0.49	0.33	0.30	0.22	0.20	0.28	0.26	0.26
64	0.25	0.29	0.40	0.46	0.55	0.48	0.55	0.53	0.55	0.49	0.56	0.52	0.57	0.48	0.48
65	0.36	0.36	0.70	0.55	0.48	0.40	0.48	0.40	0.48	0.40	0.39	0.36	0.39	0.36	0.36
66	0.36	0.36	0.70	0.55	0.41	0.32	0.41	0.32	0.41	0.32	0.22	0.24	0.22	0.24	0.24
67	0.32	0.28	0.70	0.55	0.34	0.24	0.34	0.24	0.34	0.24	0.22	0.23	0.22	0.23	0.23
68	0.28	0.28	0.70	0.55	0.27	0.24	0.27	0.24	0.27	0.24	0.22	0.22	0.22	0.22	0.22
69	0.28	0.28	0.70	0.55	0.27	0.42	0.27	0.42	0.27	0.42	0.22	0.21	0.22	0.21	0.21
70	0.22	0.28	1.00	0.55	0.27	0.30	0.27	0.30	0.27	0.30	0.22	0.20	0.22	0.20	0.20
71	0.22	0.28	1.00	0.55	0.41	0.30	0.41	0.30	0.41	0.30	0.20	0.19	0.20	0.19	0.19
72	0.22	0.21	1.00	1.00	0.55	0.30	0.55	0.30	0.55	0.30	0.18	0.18	0.18	0.18	0.18
73	0.22	0.21	1.00	1.00	0.55	0.30	0.55	0.30	0.55	0.30	0.16	0.17	0.16	0.17	0.17
74	0.22	0.21	1.00	1.00	0.55	0.30	0.55	0.30	0.55	0.30	0.16	0.17	0.16	0.17	0.17
75	0.22	0.21	1.00	1.00	0.55	0.30	0.55	0.30	0.55	0.30	0.16	0.17	0.16	0.17	0.17
76	0.22	0.21	1.00	1.00	0.55	0.30	0.55	0.30	0.55	0.30	0.16	0.17	0.16	0.17	0.17
77	0.22	0.21	1.00	1.00	0.55	0.30	0.55	0.30	0.55	0.30	0.16	0.17	0.16	0.17	0.17
78	0.22	0.21	1.00	1.00	0.55	0.30	0.55	0.30	0.55	0.30	0.16	0.17	0.16	0.17	0.17
79	0.22	0.21	1.00	1.00	0.55	0.30	0.55	0.30	0.55	0.30	0.16	0.17	0.16	0.17	0.17
80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Probability of Service Retirement (Hired before 5/1/2013)												
Age	PERS		PSERS				LEOFF		WSPRS			
	Plan 1		Plans 2/3				Plan 2		Plan 1		Plan 2	
			Service less than 30 years		Service greater than or equal to 30 years				Service less than 30 years		Service greater than or equal to 30 years	
	Male	Female	Male	Female	Male	Female	Male	Female	Male & Female		Male & Female	
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
47	0.46	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
48	0.55	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
49	0.50	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
50	0.45	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.12	0.03	0.27
51	0.40	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.12	0.04	0.24
52	0.40	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.12	0.05	0.24
53	0.40	0.30	0.00	0.00	0.00	0.00	0.02	0.02	0.07	0.12	0.10	0.24
54	0.40	0.40	0.00	0.00	0.00	0.00	0.02	0.02	0.10	0.16	0.10	0.24
55	0.17	0.28	0.02	0.02	0.12	0.12	0.02	0.02	0.10	0.20	0.10	0.20
56	0.17	0.16	0.03	0.02	0.12	0.12	0.05	0.04	0.10	0.20	0.10	0.20
57	0.17	0.16	0.04	0.02	0.12	0.12	0.08	0.06	0.13	0.20	0.10	0.20
58	0.17	0.16	0.05	0.02	0.12	0.12	0.11	0.08	0.13	0.20	0.15	0.20
59	0.20	0.30	0.06	0.04	0.16	0.24	0.14	0.10	0.13	0.20	0.15	0.33
60	0.16	0.16	0.07	0.06	0.12	0.12	0.30	0.34	0.23	0.25	0.15	0.33
61	0.23	0.21	0.08	0.13	0.20	0.20	0.26	0.26	0.23	0.25	0.19	0.33
62	0.30	0.26	0.24	0.20	0.28	0.28	0.30	0.34	0.23	0.25	0.23	0.33
63	0.22	0.20	0.22	0.18	0.26	0.26	0.50	0.52	0.23	0.25	0.20	0.33
64	0.28	0.28	0.56	0.56	0.56	0.56	0.70	0.70	0.23	0.25	0.20	0.33
65	0.34	0.36	0.40	0.40	0.40	0.40	0.50	0.35	0.23	0.25	0.25	1.00
66	0.30	0.22	0.24	0.24	0.24	0.24	0.30	0.35	0.23	0.25	0.25	1.00
67	0.26	0.22	0.24	0.24	0.24	0.24	0.30	0.35	0.23	0.25	0.25	1.00
68	0.22	0.22	0.24	0.24	0.24	0.24	0.30	0.35	0.23	0.25	0.25	1.00
69	0.22	0.22	0.24	0.24	0.24	0.24	0.30	0.35	0.23	0.25	0.25	1.00
70	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
71	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
72	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
73	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
74	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
75	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
76	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
77	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
78	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
79	0.22	0.22	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Probability of Service Retirement (Hired on or after 5/1/2013)*								
Age	TRS				SERS		PERS	
	Plans 2/3				Plans 2/3		Plans 2/3	
	Service equal to 30 years		Service greater than 30 years		Service greater than or equal to 30 years		Service greater than or equal to 30 years	
	Male	Female	Male	Female	Male	Female	Male	Female
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.16	0.14	0.09	0.09	0.08	0.09	0.09	0.09
56	0.15	0.15	0.10	0.10	0.08	0.08	0.09	0.08
57	0.14	0.16	0.11	0.11	0.09	0.08	0.09	0.08
58	0.17	0.17	0.12	0.13	0.09	0.08	0.09	0.08
59	0.21	0.18	0.14	0.15	0.11	0.16	0.12	0.15
60	0.25	0.19	0.15	0.14	0.09	0.09	0.10	0.09
61	0.33	0.29	0.20	0.19	0.18	0.17	0.15	0.17
62	0.40	0.39	0.30	0.28	0.27	0.25	0.26	0.24
63	0.35	0.35	0.27	0.26	0.25	0.23	0.24	0.22
64	0.55	0.50	0.55	0.48	0.56	0.50	0.56	0.56
65	0.48	0.40	0.48	0.40	0.39	0.36	0.40	0.40
66	0.41	0.32	0.41	0.32	0.22	0.24	0.24	0.24
67	0.34	0.24	0.34	0.24	0.22	0.23	0.24	0.24
68	0.27	0.24	0.27	0.24	0.22	0.22	0.24	0.24
69	0.27	0.42	0.27	0.42	0.22	0.21	0.24	0.24
70	0.27	0.30	0.27	0.30	0.22	0.20	0.24	0.24
71	0.41	0.30	0.41	0.30	0.20	0.19	0.24	0.24
72	0.55	0.30	0.55	0.30	0.18	0.18	0.24	0.24
73	0.55	0.30	0.55	0.30	0.16	0.17	0.24	0.24
74	0.55	0.30	0.55	0.30	0.16	0.17	0.24	0.24
75	0.55	0.30	0.55	0.30	0.16	0.17	0.24	0.24
76	0.55	0.30	0.55	0.30	0.16	0.17	0.24	0.24
77	0.55	0.30	0.55	0.30	0.16	0.17	0.24	0.24
78	0.55	0.30	0.55	0.30	0.16	0.17	0.24	0.24
79	0.55	0.30	0.55	0.30	0.16	0.17	0.24	0.24
80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

*We expect no change in retirement behavior for less than 30 years of service.

Our mortality rates include an assumption for future mortality improvements. We took two steps to build our mortality assumptions.

First, we developed the base mortality table by starting with RP-2000, published by the Society of Actuaries, and applying age offsets for each system and plan. When age offsets are negative, it means we think people of a given age are generally healthier than others their age. In other words, we expect their mortality experience will be similar to younger people. Conversely, a positive age offset means we expect mortality experience for a given age to match that of a higher age in the general population. For instance, we expect a 50-year-old PERS male to have the same mortality rate as other 49-year-old males because we assume a negative one-year age offset.

Next, we applied mortality improvements to the RP-2000 mortality table using Scale BB. Beginning with the *2013 Actuarial Valuation Report*, we use “generational” mortality instead of projecting to a given year. Under generational mortality, a member is assumed to receive additional mortality improvements in each future year, throughout their lifetime.

As an example of generational mortality, consider a healthy PERS Plan 1 male, age 50. To project the RP-2000 mortality rates to the valuation year (2013), we use the following equation.

$$\text{RP-2000 rate} \times (1 - \text{Scale BB})^{13}$$

For a 50-year-old male, this is $0.001995 \times (1 - 0.003)^{13} = 0.001919$.

The next tables show the age offsets we used as well as the mortality rates projected to the current valuation year for each plan. Please note that this table is meant to be an example only. Under generational mortality, the mortality rate for each age will improve in each future year by the rates in the mortality improvement table.

Following these tables, the next table shows Scale BB, which was published by the Society of Actuaries.

Please see the *2007-2012 Experience Study* for more details regarding the development of these rates.

Mortality Projected to 2013						
Offsets Age	PERS, SERS, and PSERS		TRS		LEOFF and WSPRS	
	Male	Female	Male	Female	Male	Female
	-1	-1	-3	-2	-1	1
20	0.000318	0.000183	0.000289	0.000181	0.000318	0.000185
21	0.000332	0.000184	0.000304	0.000183	0.000332	0.000187
22	0.000343	0.000185	0.000318	0.000184	0.000343	0.000189
23	0.000352	0.000187	0.000332	0.000185	0.000352	0.000193
24	0.000359	0.000189	0.000343	0.000187	0.000359	0.000199
25	0.000362	0.000193	0.000352	0.000189	0.000362	0.000206
26	0.000362	0.000199	0.000359	0.000193	0.000362	0.000214
27	0.000364	0.000206	0.000362	0.000199	0.000364	0.000226
28	0.000367	0.000214	0.000362	0.000206	0.000367	0.000239
29	0.000378	0.000226	0.000364	0.000214	0.000378	0.000254
30	0.000396	0.000239	0.000367	0.000226	0.000396	0.000295
31	0.000427	0.000254	0.000378	0.000239	0.000427	0.000337
32	0.000480	0.000295	0.000396	0.000254	0.000480	0.000379
33	0.000540	0.000337	0.000427	0.000295	0.000540	0.000418
34	0.000607	0.000379	0.000480	0.000337	0.000607	0.000457
35	0.000675	0.000418	0.000540	0.000379	0.000675	0.000494
36	0.000743	0.000457	0.000607	0.000418	0.000743	0.000533
37	0.000809	0.000494	0.000675	0.000457	0.000809	0.000575
38	0.000869	0.000533	0.000743	0.000494	0.000869	0.000623
39	0.000927	0.000575	0.000809	0.000533	0.000927	0.000679
40	0.000982	0.000623	0.000869	0.000575	0.000982	0.000744
41	0.001038	0.000679	0.000927	0.000623	0.001038	0.000819
42	0.001098	0.000744	0.000982	0.000679	0.001098	0.000901
43	0.001168	0.000819	0.001038	0.000744	0.001168	0.000990
44	0.001249	0.000901	0.001098	0.000819	0.001249	0.001081
45	0.001343	0.000990	0.001168	0.000901	0.001343	0.001176
46	0.001450	0.001081	0.001249	0.000990	0.001450	0.001275
47	0.001554	0.001176	0.001343	0.001081	0.001554	0.001379
48	0.001668	0.001275	0.001450	0.001176	0.001668	0.001491
49	0.001789	0.001379	0.001554	0.001275	0.001789	0.001612
50	0.001919	0.001491	0.001668	0.001379	0.001919	0.001781
51	0.002056	0.001612	0.001789	0.001491	0.002056	0.001941
52	0.002355	0.001781	0.001919	0.001612	0.002355	0.002122
53	0.002565	0.001941	0.002056	0.001781	0.002565	0.002331
54	0.002804	0.002095	0.002355	0.001916	0.002804	0.002579

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

Mortality Projected to 2013 (Continued)						
Offsets Age	PERS, SERS, and PSERS		TRS		LEOFF and WSPRS	
	Male	Female	Male	Female	Male	Female
	-1	-1	-3	-2	-1	1
55	0.003074	0.002271	0.002565	0.002068	0.003074	0.002895
56	0.003485	0.002513	0.002804	0.002242	0.003485	0.003216
57	0.003987	0.002820	0.003034	0.002480	0.003987	0.003581
58	0.004397	0.003133	0.003395	0.002784	0.004397	0.004001
59	0.004876	0.003488	0.003884	0.003092	0.004876	0.004494
60	0.005426	0.003897	0.004283	0.003443	0.005426	0.005102
61	0.006078	0.004378	0.004750	0.003846	0.006078	0.005765
62	0.006825	0.004970	0.005286	0.004321	0.006825	0.006537
63	0.007684	0.005690	0.005921	0.004970	0.007684	0.007367
64	0.008671	0.006537	0.006648	0.005690	0.008671	0.008296
65	0.009642	0.007367	0.007485	0.006537	0.009642	0.009363
66	0.010745	0.008296	0.008446	0.007367	0.010745	0.010396
67	0.011996	0.009363	0.009391	0.008296	0.011996	0.011492
68	0.013208	0.010396	0.010465	0.009363	0.013208	0.012702
69	0.014683	0.011492	0.011839	0.010396	0.014683	0.014310
70	0.016270	0.012702	0.013208	0.011492	0.016270	0.015880
71	0.018245	0.014310	0.014683	0.012702	0.018245	0.017663
72	0.020187	0.015880	0.016270	0.014310	0.020187	0.019634
73	0.022415	0.017663	0.018245	0.015880	0.022415	0.021760
74	0.024967	0.019634	0.020187	0.017663	0.024967	0.024024
75	0.027853	0.021760	0.022415	0.019634	0.027853	0.026468
76	0.031085	0.024024	0.024967	0.021760	0.031085	0.029151
77	0.034647	0.026468	0.027853	0.024024	0.034647	0.032134
78	0.038539	0.029151	0.031085	0.026468	0.038539	0.035477
79	0.042825	0.032134	0.034647	0.029151	0.042825	0.039215
80	0.047594	0.035477	0.038539	0.032134	0.047594	0.043404
81	0.052886	0.039215	0.042825	0.035477	0.052886	0.048117
82	0.059190	0.043404	0.047594	0.039215	0.059190	0.053427
83	0.066129	0.048117	0.052886	0.043404	0.066129	0.059420
84	0.073714	0.053427	0.059190	0.048117	0.073714	0.066197
85	0.081980	0.059420	0.066129	0.053427	0.081980	0.073830
86	0.091000	0.066197	0.073714	0.059420	0.091000	0.082344
87	0.102232	0.073830	0.083069	0.066197	0.102232	0.091717
88	0.114762	0.082344	0.093432	0.073830	0.114762	0.101847
89	0.128717	0.091717	0.104961	0.082344	0.128717	0.112555

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

Mortality Projected to 2013 (Continued)						
Offsets Age	PERS, SERS, and PSERS		TRS		LEOFF and WSPRS	
	Male	Female	Male	Female	Male	Female
	-1	-1	-3	-2	-1	1
90	0.144131	0.103195	0.117822	0.092932	0.144131	0.125237
91	0.160944	0.115554	0.132146	0.104560	0.160944	0.138313
92	0.177617	0.128569	0.147966	0.117080	0.177617	0.151534
93	0.195128	0.141990	0.165223	0.130266	0.195128	0.164674
94	0.213269	0.155559	0.182334	0.143862	0.213269	0.177533
95	0.231828	0.169043	0.200305	0.157607	0.231828	0.189924
96	0.250616	0.182238	0.218921	0.171267	0.250616	0.201662
97	0.269491	0.194952	0.237965	0.184634	0.269491	0.212577
98	0.284628	0.204312	0.253910	0.194952	0.284628	0.219639
99	0.303218	0.215369	0.273030	0.206995	0.303218	0.228371
100	0.317558	0.225224	0.288366	0.215369	0.317558	0.235455
101	0.335704	0.231366	0.307196	0.225443	0.335704	0.247960
102	0.349415	0.238544	0.321724	0.231366	0.349415	0.259209
103	0.366882	0.251209	0.340104	0.241670	0.366882	0.275449
104	0.378090	0.262606	0.353994	0.251209	0.378090	0.289328
105	0.392003	0.279055	0.371685	0.266044	0.392003	0.307811
106	0.397886	0.293116	0.383040	0.279055	0.397886	0.322725
107	0.400000	0.307811	0.392003	0.293116	0.400000	0.337441
108	0.400000	0.322725	0.397886	0.307811	0.400000	0.351544
109	0.400000	0.337441	0.400000	0.322725	0.400000	0.364617
110	0.400000	0.351544	0.400000	0.337441	0.400000	0.376246
111	0.400000	0.364617	0.400000	0.351544	0.400000	0.386015
112	0.400000	0.376246	0.400000	0.364617	0.400000	0.393507
113	0.400000	0.386015	0.400000	0.376246	0.400000	0.398308
114	0.400000	0.393507	0.400000	0.386015	0.400000	0.400000
115	0.400000	0.398308	0.400000	0.393507	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.398308	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	0.400000	0.400000	0.400000	0.400000
119	0.400000	0.400000	0.400000	0.400000	0.400000	1.000000
120	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

100% Scale BB Mortality Improvement								
Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.0030	0.0030	50	0.0030	0.0030	80	0.0150	0.0120
21	0.0030	0.0030	51	0.0030	0.0030	81	0.0150	0.0120
22	0.0030	0.0030	52	0.0030	0.0030	82	0.0150	0.0120
23	0.0030	0.0030	53	0.0030	0.0030	83	0.0150	0.0120
24	0.0030	0.0030	54	0.0030	0.0040	84	0.0150	0.0120
25	0.0030	0.0030	55	0.0030	0.0050	85	0.0150	0.0120
26	0.0030	0.0030	56	0.0030	0.0060	86	0.0150	0.0120
27	0.0030	0.0030	57	0.0040	0.0070	87	0.0140	0.0120
28	0.0030	0.0030	58	0.0050	0.0080	88	0.0130	0.0120
29	0.0030	0.0030	59	0.0060	0.0090	89	0.0120	0.0120
30	0.0030	0.0030	60	0.0070	0.0100	90	0.0110	0.0110
31	0.0030	0.0030	61	0.0080	0.0110	91	0.0100	0.0100
32	0.0030	0.0030	62	0.0090	0.0120	92	0.0090	0.0090
33	0.0030	0.0030	63	0.0100	0.0120	93	0.0080	0.0080
34	0.0030	0.0030	64	0.0110	0.0120	94	0.0070	0.0070
35	0.0030	0.0030	65	0.0120	0.0120	95	0.0060	0.0060
36	0.0030	0.0030	66	0.0130	0.0120	96	0.0050	0.0050
37	0.0030	0.0030	67	0.0140	0.0120	97	0.0040	0.0040
38	0.0030	0.0030	68	0.0150	0.0120	98	0.0040	0.0040
39	0.0030	0.0030	69	0.0150	0.0120	99	0.0030	0.0030
40	0.0030	0.0030	70	0.0150	0.0120	100	0.0030	0.0030
41	0.0030	0.0030	71	0.0150	0.0120	101	0.0020	0.0020
42	0.0030	0.0030	72	0.0150	0.0120	102	0.0020	0.0020
43	0.0030	0.0030	73	0.0150	0.0120	103	0.0010	0.0010
44	0.0030	0.0030	74	0.0150	0.0120	104	0.0010	0.0010
45	0.0030	0.0030	75	0.0150	0.0120	105	0.0000	0.0000
46	0.0030	0.0030	76	0.0150	0.0120	106	0.0000	0.0000
47	0.0030	0.0030	77	0.0150	0.0120	107	0.0000	0.0000
48	0.0030	0.0030	78	0.0150	0.0120	108	0.0000	0.0000
49	0.0030	0.0030	79	0.0150	0.0120	109	0.0000	0.0000
						110	0.0000	0.0000

Disabled Mortality Projected to 2013				
Offsets	All Systems Except LEOFF 1		LEOFF 1*	
	Male	Female	Male	Female
Age	0	0	2	2
20	0.021706	0.007165	0.000352	0.000187
21	0.021706	0.007165	0.000359	0.000189
22	0.021706	0.007165	0.000362	0.000193
23	0.021706	0.007165	0.000362	0.000199
24	0.021706	0.007165	0.000364	0.000206
25	0.021706	0.007165	0.000367	0.000214
26	0.021706	0.007165	0.000378	0.000226
27	0.021706	0.007165	0.000396	0.000239
28	0.021706	0.007165	0.000427	0.000254
29	0.021706	0.007165	0.000480	0.000295
30	0.021706	0.007165	0.000540	0.000337
31	0.021706	0.007165	0.000607	0.000379
32	0.021706	0.007165	0.000675	0.000418
33	0.021706	0.007165	0.000743	0.000457
34	0.021706	0.007165	0.000809	0.000494
35	0.021706	0.007165	0.000869	0.000533
36	0.021706	0.007165	0.000927	0.000575
37	0.021706	0.007165	0.000982	0.000623
38	0.021706	0.007165	0.001038	0.000679
39	0.021706	0.007165	0.001098	0.000744
40	0.021706	0.007165	0.001168	0.000819
41	0.021706	0.007165	0.001249	0.000901
42	0.021706	0.007165	0.001343	0.000990
43	0.021706	0.007165	0.001450	0.001081
44	0.021706	0.007165	0.001554	0.001176
45	0.021706	0.007165	0.001668	0.001275
46	0.022934	0.007871	0.001789	0.001379
47	0.024162	0.008616	0.001919	0.001491
48	0.025393	0.009401	0.002056	0.001612
49	0.026626	0.010227	0.002355	0.001781
50	0.027865	0.011093	0.002565	0.001941
51	0.029109	0.011999	0.002804	0.002122
52	0.030354	0.012941	0.003074	0.002331
53	0.031600	0.013911	0.003485	0.002613
54	0.032844	0.014710	0.004039	0.002933

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

*LEOFF 1 uses RP-2000 Healthy mortality table as its base.

Disabled Mortality Projected to 2013 (Continued)				
Offsets Age	All Systems Except LEOFF 1		LEOFF 1*	
	Male	Female	Male	Female
	0	0	2	2
55	0.034084	0.015500	0.004513	0.003259
56	0.035325	0.016274	0.005071	0.003628
57	0.036095	0.017026	0.005643	0.004053
58	0.036853	0.017756	0.006321	0.004554
59	0.037608	0.018465	0.007098	0.005169
60	0.038373	0.019164	0.007993	0.005842
61	0.039163	0.019864	0.009019	0.006624
62	0.039993	0.020582	0.010029	0.007367
63	0.040878	0.021619	0.011177	0.008296
64	0.041837	0.022736	0.012479	0.009363
65	0.042886	0.023955	0.013740	0.010396
66	0.044046	0.025296	0.015076	0.011492
67	0.045331	0.026775	0.016486	0.012702
68	0.046758	0.028407	0.018245	0.014310
69	0.048979	0.030203	0.020187	0.015880
70	0.051419	0.032169	0.022415	0.017663
71	0.054096	0.034310	0.024967	0.019634
72	0.057025	0.036627	0.027853	0.021760
73	0.060218	0.039121	0.031085	0.024024
74	0.063685	0.041793	0.034647	0.026468
75	0.067428	0.044644	0.038539	0.029151
76	0.071441	0.047676	0.042825	0.032134
77	0.075711	0.050896	0.047594	0.035477
78	0.080223	0.054315	0.052886	0.039215
79	0.084949	0.057946	0.059190	0.043404
80	0.089862	0.061809	0.066129	0.048117
81	0.094933	0.065931	0.073714	0.053427
82	0.100137	0.070344	0.081980	0.059420
83	0.105449	0.075080	0.091000	0.066197
84	0.110855	0.080171	0.100892	0.073830
85	0.116344	0.085649	0.111776	0.082344
86	0.121907	0.091543	0.123728	0.091717
87	0.129238	0.097879	0.138550	0.101847
88	0.136816	0.104676	0.154718	0.112555
89	0.144652	0.111949	0.170753	0.123601

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

*LEOFF 1 uses RP-2000 Healthy mortality table as its base.

Disabled Mortality Projected to 2013 (Continued)				
Offsets Age	All Systems Except LEOFF 1		LEOFF 1*	
	Male	Female	Male	Female
	0	0	2	2
90	0.158844	0.121292	0.187595	0.136508
91	0.175301	0.131363	0.205043	0.149559
92	0.192587	0.142191	0.222895	0.162529
93	0.210494	0.153534	0.240969	0.175223
94	0.228814	0.166845	0.259127	0.187455
95	0.247362	0.179872	0.277287	0.199043
96	0.265995	0.192423	0.295405	0.209819
97	0.284628	0.204312	0.313442	0.219639
98	0.299288	0.212577	0.327063	0.225411
99	0.317558	0.222524	0.344891	0.235455
100	0.331358	0.228371	0.357447	0.244749
101	0.349415	0.238544	0.373200	0.259209
102	0.362136	0.247960	0.381932	0.271886
103	0.378090	0.262606	0.392744	0.289328
104	0.386937	0.275449	0.394831	0.303833
105	0.397886	0.293116	0.400000	0.322725
106	0.400000	0.307811	0.400000	0.337441
107	0.400000	0.322725	0.400000	0.351544
108	0.400000	0.337441	0.400000	0.364617
109	0.400000	0.351544	0.400000	0.376246
110	0.400000	0.364617	0.400000	0.386015
111	0.400000	0.376246	0.400000	0.393507
112	0.400000	0.386015	0.400000	0.398308
113	0.400000	0.393507	0.400000	0.400000
114	0.400000	0.398308	0.400000	0.400000
115	0.400000	0.400000	0.400000	0.400000
116	0.400000	0.400000	0.400000	0.400000
117	0.400000	0.400000	0.400000	0.400000
118	0.400000	0.400000	1.000000	1.000000
119	0.400000	0.400000	1.000000	1.000000
120	1.000000	1.000000	1.000000	1.000000

Improvements in mortality are projected to the valuation year specified based on 100% of Scale BB.

*LEOFF 1 uses RP-2000 Healthy mortality table as its base.

Probability of Disablement								
Age	PERS*				TRS			
	Plan 1		Plan 2/3		Plan 1		Plan 2/3	
	Male	Female	Male	Female	Male	Female	Male	Female
20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0000	0.0000
25	0.0000	0.0000	0.0001	0.0000	0.0001	0.0001	0.0000	0.0000
26	0.0000	0.0000	0.0001	0.0000	0.0001	0.0001	0.0000	0.0000
27	0.0000	0.0000	0.0001	0.0000	0.0001	0.0001	0.0000	0.0000
28	0.0000	0.0000	0.0001	0.0000	0.0001	0.0001	0.0000	0.0000
29	0.0000	0.0000	0.0001	0.0000	0.0002	0.0002	0.0000	0.0000
30	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002	0.0000	0.0000
31	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002	0.0001	0.0000
32	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001
33	0.0000	0.0000	0.0001	0.0001	0.0003	0.0003	0.0001	0.0001
34	0.0000	0.0000	0.0001	0.0002	0.0003	0.0003	0.0001	0.0001
35	0.0003	0.0003	0.0002	0.0002	0.0003	0.0003	0.0001	0.0001
36	0.0004	0.0004	0.0002	0.0002	0.0003	0.0003	0.0001	0.0001
37	0.0004	0.0004	0.0002	0.0003	0.0004	0.0004	0.0001	0.0001
38	0.0005	0.0005	0.0002	0.0003	0.0004	0.0004	0.0001	0.0001
39	0.0006	0.0006	0.0002	0.0003	0.0004	0.0004	0.0001	0.0001
40	0.0008	0.0007	0.0002	0.0003	0.0004	0.0004	0.0001	0.0001
41	0.0009	0.0008	0.0003	0.0003	0.0005	0.0005	0.0001	0.0001
42	0.0010	0.0013	0.0003	0.0003	0.0006	0.0006	0.0002	0.0001
43	0.0011	0.0013	0.0003	0.0003	0.0007	0.0007	0.0002	0.0001
44	0.0013	0.0014	0.0004	0.0004	0.0008	0.0008	0.0002	0.0002
45	0.0015	0.0014	0.0005	0.0005	0.0009	0.0010	0.0002	0.0002
46	0.0016	0.0015	0.0005	0.0005	0.0011	0.0011	0.0003	0.0002
47	0.0018	0.0015	0.0006	0.0006	0.0012	0.0012	0.0003	0.0003
48	0.0021	0.0020	0.0007	0.0007	0.0013	0.0013	0.0003	0.0003
49	0.0023	0.0025	0.0008	0.0009	0.0015	0.0015	0.0004	0.0003

Rates have been rounded for display purposes.

*10% of all PERS Plan 1 disabilities are assumed to be duty related.

Probability of Disablement (Continued)								
Age	PERS*				TRS			
	Plan 1		Plan 2/3		Plan 1		Plan 2/3	
	Male	Female	Male	Female	Male	Female	Male	Female
50	0.0025	0.0030	0.0009	0.0010	0.0016	0.0017	0.0004	0.0003
51	0.0028	0.0035	0.0010	0.0011	0.0019	0.0019	0.0005	0.0004
52	0.0030	0.0040	0.0011	0.0013	0.0022	0.0022	0.0006	0.0005
53	0.0048	0.0048	0.0016	0.0018	0.0025	0.0025	0.0006	0.0005
54	0.0065	0.0056	0.0021	0.0023	0.0029	0.0029	0.0008	0.0006
55	0.0082	0.0064	0.0026	0.0028	0.0033	0.0034	0.0011	0.0008
56	0.0100	0.0072	0.0034	0.0033	0.0036	0.0036	0.0013	0.0009
57	0.0117	0.0080	0.0042	0.0038	0.0038	0.0039	0.0015	0.0011
58	0.0117	0.0080	0.0052	0.0051	0.0041	0.0042	0.0018	0.0013
59	0.0096	0.0054	0.0064	0.0064	0.0044	0.0044	0.0021	0.0016
60	0.0075	0.0035	0.0079	0.0077	0.0047	0.0048	0.0025	0.0019
61	0.0059	0.0022	0.0097	0.0090	0.0052	0.0053	0.0029	0.0023
62	0.0046	0.0014	0.0120	0.0103	0.0058	0.0059	0.0034	0.0027
63	0.0036	0.0009	0.0102	0.0092	0.0065	0.0066	0.0041	0.0032
64	0.0028	0.0006	0.0083	0.0069	0.0072	0.0073	0.0048	0.0039
65	0.0022	0.0004	0.0061	0.0053	0.0056	0.0057	0.0024	0.0016
66	0.0017	0.0002	0.0045	0.0040	0.0043	0.0043	0.0016	0.0011
67	0.0013	0.0002	0.0034	0.0030	0.0033	0.0033	0.0011	0.0008
68	0.0011	0.0001	0.0025	0.0023	0.0025	0.0025	0.0007	0.0006
69	0.0008	0.0001	0.0018	0.0017	0.0019	0.0019	0.0005	0.0004
70	0.0006	0.0000	0.0014	0.0013	0.0015	0.0015	0.0003	0.0003
71	0.0005	0.0000	0.0010	0.0010	0.0011	0.0011	0.0002	0.0002
72	0.0004	0.0000	0.0007	0.0008	0.0009	0.0009	0.0002	0.0001
73	0.0003	0.0000	0.0005	0.0006	0.0007	0.0007	0.0001	0.0001
74	0.0002	0.0000	0.0004	0.0004	0.0005	0.0005	0.0001	0.0001
75	0.0002	0.0000	0.0003	0.0003	0.0004	0.0004	0.0000	0.0001
76	0.0001	0.0000	0.0002	0.0002	0.0003	0.0003	0.0000	0.0000
77	0.0001	0.0000	0.0002	0.0002	0.0002	0.0002	0.0000	0.0000
78	0.0001	0.0000	0.0001	0.0001	0.0002	0.0002	0.0000	0.0000
79	0.0001	0.0000	0.0001	0.0001	0.0001	0.0001	0.0000	0.0000
80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Rates have been rounded for display purposes.

*10% of all PERS Plan 1 disabilities are assumed to be duty related.

Probability of Disablement										
Age	SERS Plan 2/3		PSERS Plan 2		LEOFF* Plan 1		LEOFF* Plan 2		WSPRS* 1/2	
	Male	Female	Service greater than or equal to 10 years						Both	Both
			Service less than 10 years		Male	Female	Both	Both		
			Male	Female						
20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0001	0.0001	
21	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0001	0.0001	
22	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0001	0.0001	
23	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0001	0.0001	
24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0010	0.0002	0.0001	
25	0.0000	0.0000	0.0001	0.0000	0.0001	0.0000	0.0010	0.0002	0.0001	
26	0.0000	0.0000	0.0001	0.0000	0.0001	0.0000	0.0024	0.0002	0.0001	
27	0.0000	0.0000	0.0001	0.0000	0.0001	0.0000	0.0038	0.0003	0.0001	
28	0.0000	0.0000	0.0001	0.0000	0.0001	0.0000	0.0052	0.0003	0.0001	
29	0.0000	0.0000	0.0001	0.0000	0.0001	0.0000	0.0066	0.0004	0.0002	
30	0.0000	0.0000	0.0001	0.0001	0.0001	0.0001	0.0080	0.0005	0.0002	
31	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0094	0.0005	0.0002	
32	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0107	0.0006	0.0002	
33	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0121	0.0006	0.0002	
34	0.0001	0.0001	0.0001	0.0002	0.0001	0.0002	0.0135	0.0007	0.0003	
35	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0149	0.0008	0.0003	
36	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0163	0.0009	0.0003	
37	0.0001	0.0002	0.0002	0.0003	0.0002	0.0003	0.0190	0.0011	0.0004	
38	0.0002	0.0002	0.0002	0.0003	0.0002	0.0003	0.0205	0.0012	0.0004	
39	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0220	0.0013	0.0005	
40	0.0003	0.0002	0.0002	0.0003	0.0003	0.0003	0.0235	0.0014	0.0006	
41	0.0003	0.0001	0.0003	0.0003	0.0003	0.0004	0.0249	0.0014	0.0006	
42	0.0003	0.0001	0.0003	0.0003	0.0004	0.0004	0.0264	0.0015	0.0007	
43	0.0004	0.0001	0.0003	0.0003	0.0004	0.0004	0.0279	0.0016	0.0008	
44	0.0005	0.0002	0.0004	0.0004	0.0005	0.0005	0.0360	0.0017	0.0009	
45	0.0005	0.0002	0.0005	0.0005	0.0006	0.0006	0.0400	0.0018	0.0010	
46	0.0006	0.0003	0.0005	0.0005	0.0007	0.0007	0.0468	0.0020	0.0011	
47	0.0007	0.0003	0.0006	0.0006	0.0008	0.0008	0.0532	0.0023	0.0013	
48	0.0009	0.0004	0.0007	0.0007	0.0009	0.0009	0.0592	0.0026	0.0014	
49	0.0010	0.0005	0.0008	0.0009	0.0010	0.0011	0.0648	0.0029	0.0016	

Rates have been rounded for display purposes.

*LEOFF and WSPRS disability retirements are assumed to continue after service retirement eligibility, except for LEOFF 1 members with more than 30 years of service.

Probability of Disablement (Continued)										
Age	SERS Plan 2/3		PSERS Plan 2		LEOFF* Plan 1		LEOFF* Plan 2		WSPRS* 1/2	
	Male	Female	Service greater than or equal to 10 years						Both	Both
			Service less than 10 years		Male	Female	Both	Both		
			Male	Female						
50	0.0012	0.0006	0.0009	0.0010	0.0012	0.0013	0.0700	0.0032	0.0018	
51	0.0014	0.0008	0.0010	0.0011	0.0013	0.0015	0.0748	0.0036	0.0020	
52	0.0017	0.0009	0.0011	0.0013	0.0015	0.0016	0.0792	0.0040	0.0023	
53	0.0020	0.0011	0.0016	0.0018	0.0021	0.0023	0.0832	0.0045	0.0026	
54	0.0024	0.0014	0.0021	0.0023	0.0028	0.0029	0.0868	0.0050	0.0029	
55	0.0028	0.0017	0.0026	0.0028	0.0034	0.0036	0.0900	0.0055	0.0032	
56	0.0033	0.0021	0.0034	0.0033	0.0044	0.0043	0.0928	0.0062	0.0023	
57	0.0039	0.0027	0.0042	0.0038	0.0055	0.0049	0.0952	0.0069	0.0016	
58	0.0046	0.0033	0.0052	0.0051	0.0068	0.0067	0.0972	0.0076	0.0011	
59	0.0054	0.0040	0.0064	0.0064	0.0084	0.0084	0.0988	0.0085	0.0008	
60	0.0064	0.0050	0.0079	0.0077	0.0000	0.0000	0.1000	0.0095	0.0006	
61	0.0076	0.0061	0.0097	0.0090	0.0000	0.0000	0.1008	0.0105	0.0004	
62	0.0089	0.0067	0.0120	0.0103	0.0000	0.0000	0.1012	0.0117	0.0003	
63	0.0110	0.0057	0.0102	0.0092	0.0000	0.0000	0.1012	0.0131	0.0002	
64	0.0081	0.0049	0.0083	0.0069	0.0000	0.0000	0.1008	0.0145	0.0001	
65	0.0059	0.0041	0.0061	0.0053	0.0000	0.0000	0.1000	0.0162	0.0000	
66	0.0044	0.0035	0.0045	0.0040	0.0000	0.0000	0.0756	0.0026	0.0000	
67	0.0032	0.0030	0.0034	0.0030	0.0000	0.0000	0.0544	0.0004	0.0000	
68	0.0024	0.0025	0.0025	0.0023	0.0000	0.0000	0.0364	0.0001	0.0000	
69	0.0017	0.0021	0.0018	0.0017	0.0000	0.0000	0.0216	0.0000	0.0000	
70	0.0013	0.0018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
71	0.0009	0.0015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
72	0.0007	0.0013	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
73	0.0005	0.0011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
74	0.0004	0.0009	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
75	0.0003	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
76	0.0002	0.0007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
77	0.0001	0.0006	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
78	0.0001	0.0005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
79	0.0001	0.0004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	

Rates have been rounded for display purposes.

*LEOFF and WSPRS disability retirements are assumed to continue after service retirement eligibility, except for LEOFF 1 members with more than 30 years of service.

Probability of Termination										
Service Years	PERS		TRS		SERS		PSERS		LEOFF	WSPRS
	Male	Female	Male	Female	Male	Female	Male	Female	Male & Female	Male & Female
0	0.2624	0.2624	0.1110	0.1113	0.2448	0.1990	0.2624	0.2624	0.1070	0.0423
1	0.1545	0.1677	0.0903	0.0946	0.1588	0.1313	0.1545	0.1677	0.0481	0.0200
2	0.1007	0.1170	0.0598	0.0717	0.1169	0.1029	0.1007	0.1170	0.0245	0.0200
3	0.0752	0.0929	0.0451	0.0613	0.0995	0.0786	0.0752	0.0929	0.0194	0.0200
4	0.0631	0.0760	0.0414	0.0531	0.0811	0.0676	0.0631	0.0760	0.0187	0.0200
5	0.0544	0.0665	0.0368	0.0471	0.0664	0.0624	0.0544	0.0665	0.0181	0.0200
6	0.0449	0.0579	0.0295	0.0409	0.0608	0.0556	0.0449	0.0579	0.0174	0.0190
7	0.0418	0.0533	0.0272	0.0367	0.0556	0.0526	0.0418	0.0533	0.0168	0.0170
8	0.0389	0.0491	0.0251	0.0330	0.0509	0.0497	0.0389	0.0491	0.0161	0.0160
9	0.0362	0.0452	0.0231	0.0296	0.0465	0.0475	0.0362	0.0452	0.0155	0.0151
10	0.0337	0.0417	0.0213	0.0266	0.0426	0.0457	0.0337	0.0417	0.0148	0.0134
11	0.0314	0.0384	0.0197	0.0239	0.0389	0.0448	0.0314	0.0384	0.0142	0.0120
12	0.0292	0.0354	0.0182	0.0214	0.0356	0.0442	0.0292	0.0354	0.0135	0.0108
13	0.0272	0.0326	0.0167	0.0193	0.0326	0.0440	0.0272	0.0326	0.0129	0.0097
14	0.0253	0.0300	0.0154	0.0173	0.0298	0.0426	0.0253	0.0300	0.0122	0.0087
15	0.0236	0.0277	0.0142	0.0160	0.0273	0.0427	0.0236	0.0277	0.0116	0.0078
16	0.0220	0.0255	0.0131	0.0155	0.0250	0.0392	0.0220	0.0255	0.0109	0.0070
17	0.0204	0.0235	0.0121	0.0150	0.0245	0.0364	0.0204	0.0235	0.0103	0.0063
18	0.0190	0.0216	0.0115	0.0145	0.0240	0.0346	0.0190	0.0216	0.0096	0.0056
19	0.0177	0.0199	0.0113	0.0140	0.0235	0.0322	0.0177	0.0199	0.0090	0.0050
20	0.0153	0.0180	0.0100	0.0130	0.0230	0.0300	0.0153	0.0180	0.0083	0.0044
21	0.0132	0.0158	0.0095	0.0126	0.0225	0.0280	0.0132	0.0158	0.0077	0.0038
22	0.0115	0.0139	0.0093	0.0118	0.0220	0.0270	0.0115	0.0139	0.0070	0.0033
23	0.0099	0.0122	0.0090	0.0111	0.0209	0.0260	0.0099	0.0122	0.0064	0.0028
24	0.0086	0.0107	0.0088	0.0104	0.0182	0.0248	0.0086	0.0107	0.0057	0.0023
25	0.0074	0.0094	0.0082	0.0098	0.0159	0.0225	0.0074	0.0094	0.0051	0.0000
26	0.0064	0.0083	0.0077	0.0092	0.0138	0.0205	0.0064	0.0083	0.0044	0.0000
27	0.0055	0.0072	0.0071	0.0086	0.0121	0.0187	0.0055	0.0072	0.0038	0.0000
28	0.0048	0.0064	0.0067	0.0081	0.0105	0.0170	0.0048	0.0064	0.0031	0.0000
29	0.0042	0.0056	0.0062	0.0076	0.0092	0.0155	0.0042	0.0056	0.0025	0.0000
30+	0.0036	0.0049	0.0058	0.0072	0.0080	0.0141	0.0036	0.0049	0.0018	0.0000

Rates have been rounded for display purposes.

Probability of Vesting upon Termination*									
<i>(for those not eligible to retire early)</i>									
Service Years	PERS		TRS		SERS	PSERS	LEOFF		WSPRS
	Plan 1	Plan 2	Plan 1	Plan 2	Plan 2	Plan 2	Plan 1	Plan 2	Male & Female
	Male & Female								
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.500	0.550	0.725	0.700	0.650	0.550	1.000	0.325	0.475
6	0.500	0.550	0.775	0.700	0.675	0.550	1.000	0.350	0.475
7	0.550	0.550	0.800	0.700	0.675	0.550	1.000	0.350	0.475
8	0.550	0.550	0.800	0.750	0.675	0.550	1.000	0.350	0.475
9	0.600	0.575	0.800	0.750	0.700	0.575	1.000	0.375	0.475
10	0.600	0.575	0.800	0.750	0.700	0.575	1.000	0.375	0.475
11	0.600	0.600	0.825	0.775	0.700	0.600	1.000	0.400	0.475
12	0.600	0.625	0.825	0.800	0.700	0.625	1.000	0.400	0.500
13	0.600	0.625	0.875	0.800	0.700	0.625	1.000	0.400	0.500
14	0.650	0.625	0.875	0.850	0.750	0.625	1.000	0.400	0.500
15	0.650	0.650	0.875	0.850	0.750	0.650	1.000	0.400	0.500
16	0.650	0.650	0.875	0.850	0.775	0.650	1.000	0.450	0.500
17	0.650	0.675	0.875	0.850	0.775	0.675	1.000	0.450	0.500
18	0.675	0.675	0.875	0.900	0.775	0.675	1.000	0.500	0.550
19	0.675	0.675	0.875	0.900	0.775	0.675	1.000	0.550	0.600
20	0.675	0.750	0.900	0.950	0.800	0.788	1.000	0.600	0.750
21	0.675	0.750	0.900	0.950	0.825	0.788	1.000	0.600	0.800
22	0.675	0.750	0.900	0.950	0.850	0.788	1.000	0.650	0.900
23	0.675	0.800	0.925	0.950	0.850	0.840	1.000	0.800	1.000
24	0.675	0.800	0.925	0.950	0.850	0.840	1.000	0.850	1.000
25	0.700	0.800	0.925	0.950	0.850	0.840	1.000	0.900	1.000
26	0.750	0.800	0.950	0.950	0.850	0.840	1.000	0.900	1.000
27	0.750	0.850	1.000	0.975	0.900	0.893	1.000	0.900	1.000
28	0.850	0.850	1.000	0.975	0.900	0.893	1.000	0.950	1.000
29	0.900	0.900	1.000	0.975	0.900	0.945	1.000	0.950	1.000
30+	0.950	0.950	1.000	1.000	0.950	0.950	1.000	0.950	1.000

*Denotes ratio of members who do not withdraw their savings when they leave employment.

Ratio of Survivors Selecting Annuities*													
Age	PERS 1		PERS 2		PERS 3		TRS 1		TRS 2		TRS 3		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.02
27	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.08
28	0.00	0.00	0.00	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.03	0.13	0.13
29	0.00	0.00	0.00	0.00	0.03	0.16	0.00	0.00	0.00	0.00	0.08	0.17	0.17
30	0.00	0.00	0.00	0.00	0.05	0.16	0.00	0.00	0.00	0.00	0.12	0.20	0.20
31	0.00	0.00	0.00	0.00	0.07	0.16	0.00	0.00	0.00	0.00	0.15	0.23	0.23
32	0.00	0.00	0.00	0.00	0.09	0.17	0.00	0.00	0.00	0.00	0.18	0.25	0.25
33	0.00	0.00	0.00	0.00	0.11	0.17	0.00	0.00	0.00	0.00	0.21	0.27	0.27
34	0.00	0.00	0.00	0.00	0.13	0.17	0.00	0.00	0.00	0.00	0.23	0.29	0.29
35	0.00	0.00	0.00	0.00	0.15	0.18	0.00	0.00	0.00	0.00	0.25	0.31	0.31
36	0.00	0.00	0.00	0.00	0.17	0.18	0.00	0.00	0.00	0.00	0.27	0.32	0.32
37	0.00	0.00	0.00	0.00	0.19	0.18	0.00	0.00	0.00	0.00	0.29	0.34	0.34
38	0.00	0.00	0.00	0.00	0.21	0.19	0.00	0.00	0.00	0.00	0.30	0.35	0.35
39	0.00	0.00	0.00	0.00	0.23	0.19	0.00	0.00	0.00	0.00	0.32	0.36	0.36
40	0.26	0.00	0.02	0.00	0.25	0.20	0.28	0.03	0.00	0.00	0.33	0.37	0.37
41	0.34	0.06	0.05	0.01	0.27	0.20	0.37	0.14	0.00	0.00	0.35	0.38	0.38
42	0.39	0.14	0.07	0.02	0.29	0.20	0.43	0.21	0.00	0.00	0.36	0.39	0.39
43	0.43	0.19	0.10	0.04	0.31	0.21	0.46	0.25	0.00	0.00	0.37	0.40	0.40
44	0.46	0.23	0.12	0.05	0.33	0.21	0.49	0.29	0.00	0.00	0.38	0.41	0.41
45	0.48	0.26	0.15	0.06	0.35	0.21	0.51	0.32	0.00	0.00	0.39	0.42	0.42
46	0.50	0.29	0.17	0.08	0.37	0.22	0.53	0.35	0.03	0.00	0.40	0.43	0.43
47	0.52	0.32	0.20	0.09	0.39	0.22	0.55	0.37	0.07	0.01	0.41	0.43	0.43
48	0.53	0.34	0.22	0.11	0.41	0.22	0.57	0.39	0.11	0.04	0.42	0.44	0.44
49	0.54	0.36	0.25	0.12	0.43	0.23	0.58	0.40	0.14	0.07	0.43	0.45	0.45

Rates have been rounded for display purposes.

*Refers to survivor who selects annuity payments (rather than a lump sum payment) upon active or terminated vested member's death. The LEOFF 2 and WSPRS 2 ratios are 0.642 for duty-related deaths.

Ratio of Survivors Selecting Annuities*													
(Continued)													
Age	PERS 1		PERS 2		PERS 3		TRS 1		TRS 2		TRS 3		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
50	0.56	0.37	0.27	0.13	0.45	0.23	0.59	0.42	0.18	0.10	0.44	0.45	
51	0.57	0.39	0.29	0.15	0.47	0.24	0.60	0.43	0.22	0.13	0.45	0.46	
52	0.58	0.40	0.32	0.16	0.49	0.24	0.61	0.45	0.26	0.16	0.45	0.47	
53	0.58	0.42	0.34	0.18	0.51	0.24	0.62	0.46	0.30	0.19	0.46	0.47	
54	0.59	0.43	0.37	0.19	0.53	0.25	0.63	0.47	0.34	0.22	0.47	0.48	
55	0.60	0.44	0.39	0.20	0.55	0.25	0.64	0.48	0.37	0.25	0.48	0.48	
56	0.61	0.45	0.42	0.22	0.57	0.25	0.65	0.49	0.41	0.28	0.48	0.49	
57	0.62	0.46	0.44	0.23	0.59	0.26	0.65	0.50	0.45	0.31	0.49	0.49	
58	0.62	0.47	0.47	0.25	0.61	0.26	0.66	0.51	0.49	0.34	0.50	0.50	
59	0.63	0.48	0.49	0.26	0.63	0.26	0.67	0.52	0.53	0.37	0.50	0.50	
60	0.64	0.49	0.52	0.28	0.65	0.27	0.67	0.52	0.56	0.40	0.51	0.51	
61	0.64	0.50	0.54	0.29	0.67	0.27	0.68	0.53	0.60	0.43	0.52	0.51	
62	0.68	0.54	0.60	0.34	0.73	0.31	0.72	0.57	0.67	0.50	0.55	0.55	
63	0.68	0.55	0.62	0.35	0.75	0.31	0.72	0.58	0.71	0.53	0.56	0.56	
64	0.69	0.55	0.65	0.36	0.77	0.32	0.73	0.58	0.75	0.56	0.57	0.56	
65	0.69	0.56	0.67	0.38	0.79	0.32	0.73	0.59	0.79	0.59	0.57	0.56	
66	0.70	0.57	0.70	0.39	0.79	0.32	0.73	0.59	0.79	0.59	0.58	0.57	
67	0.70	0.57	0.72	0.41	0.79	0.32	0.73	0.59	0.79	0.59	0.58	0.57	
68	0.71	0.58	0.75	0.42	0.79	0.32	0.73	0.59	0.79	0.59	0.59	0.58	
69	0.71	0.59	0.77	0.44	0.79	0.32	0.73	0.59	0.79	0.59	0.59	0.58	
70	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
71	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
72	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
73	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
74	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
75	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
76	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
77	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
78	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
79	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	
80	0.72	0.59	0.80	0.45	0.79	0.32	0.73	0.59	0.79	0.59	0.60	0.58	

Rates have been rounded for display purposes.

*Refers to survivor who selects annuity payments (rather than a lump sum payment) upon active or terminated vested member's death.
The LEOFF 2 and WSPRS 2 ratios are 0.642 for duty-related deaths.

Ratio of Survivors Selecting Annuities*											
Age	SERS 2		SERS 3		PSERS		LEOFF 1	LEOFF 2	WSPRS 1	WSPRS 2	
	Male	Female	Male	Female	Male	Female	M&F	M&F	M&F	M&F	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	
32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.12	
33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.19	
34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.24	
35	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.28	0.00	0.28	
36	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.32	0.00	0.32	
37	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.35	0.00	0.35	
38	0.00	0.00	0.00	0.30	0.04	0.01	0.00	0.38	0.00	0.38	
39	0.00	0.00	0.00	0.31	0.10	0.04	0.00	0.41	0.00	0.41	
40	0.00	0.00	0.00	0.32	0.15	0.07	0.64	0.43	0.64	0.43	
41	0.00	0.00	0.02	0.32	0.19	0.10	0.64	0.45	0.64	0.45	
42	0.03	0.05	0.11	0.33	0.22	0.12	0.64	0.47	0.64	0.47	
43	0.09	0.10	0.17	0.33	0.25	0.14	0.64	0.49	0.64	0.49	
44	0.14	0.13	0.22	0.34	0.28	0.16	0.64	0.51	0.64	0.51	
45	0.18	0.16	0.26	0.34	0.30	0.17	0.64	0.52	0.64	0.52	
46	0.21	0.18	0.29	0.34	0.32	0.19	0.64	0.54	0.64	0.54	
47	0.24	0.20	0.32	0.35	0.34	0.20	0.64	0.55	0.64	0.55	
48	0.26	0.22	0.35	0.35	0.36	0.21	0.64	0.56	0.64	0.56	
49	0.29	0.24	0.37	0.35	0.38	0.22	0.64	0.58	0.64	0.58	

Rates have been rounded for display purposes.

*Refers to survivor who selects annuity payments (rather than a lump sum payment) upon active or terminated vested member's death. The LEOFF 2 and WSPRS 2 ratios are 0.642 for duty-related deaths.

Ratio of Survivors Selecting Annuities*											
(Continued)											
Age	SERS 2		SERS 3		PSERS		LEOFF 1	LEOFF 2	WSPRS 1	WSPRS 2	
	Male	Female	Male	Female	Male	Female	M&F	M&F	M&F	M&F	
50	0.31	0.25	0.39	0.36	0.40	0.23	0.64	0.59	0.64	0.59	
51	0.32	0.27	0.41	0.36	0.41	0.24	0.64	0.60	0.64	0.60	
52	0.34	0.28	0.43	0.36	0.43	0.25	0.64	0.61	0.64	0.61	
53	0.36	0.29	0.44	0.36	0.44	0.26	0.64	0.62	0.64	0.62	
54	0.37	0.30	0.46	0.36	0.45	0.27	0.64	0.63	0.64	0.63	
55	0.39	0.31	0.47	0.37	0.47	0.28	0.64	0.64	0.64	0.64	
56	0.40	0.32	0.48	0.37	0.48	0.29	0.64	0.65	0.64	0.65	
57	0.41	0.33	0.50	0.37	0.49	0.29	0.64	0.66	0.64	0.66	
58	0.42	0.34	0.51	0.37	0.50	0.30	0.64	0.67	0.64	0.67	
59	0.43	0.35	0.52	0.37	0.51	0.31	0.64	0.67	0.64	0.67	
60	0.44	0.35	0.53	0.37	0.52	0.31	0.64	0.68	0.64	0.68	
61	0.45	0.36	0.54	0.38	0.53	0.32	0.64	0.69	0.64	0.69	
62	0.49	0.40	0.58	0.41	0.57	0.36	0.67	0.73	0.67	0.73	
63	0.50	0.41	0.59	0.41	0.58	0.37	0.67	0.74	0.67	0.74	
64	0.51	0.41	0.60	0.41	0.59	0.37	0.67	0.75	0.67	0.75	
65	0.52	0.42	0.61	0.41	0.60	0.38	0.67	0.75	0.67	0.75	
66	0.53	0.43	0.62	0.42	0.61	0.38	0.67	0.75	0.67	0.75	
67	0.54	0.43	0.62	0.42	0.62	0.39	0.67	0.75	0.67	0.75	
68	0.54	0.44	0.63	0.42	0.62	0.39	0.67	0.75	0.67	0.75	
69	0.55	0.44	0.64	0.42	0.63	0.40	0.67	0.75	0.67	0.75	
70	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
71	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
72	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
73	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
74	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
75	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
76	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
77	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
78	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
79	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	
80	0.56	0.45	0.65	0.42	0.64	0.40	0.67	0.75	0.67	0.75	

Rates have been rounded for display purposes.

*Refers to survivor who selects annuity payments (rather than a lump sum payment) upon active or terminated vested member's death. The LEOFF 2 and WSPRS 2 ratios are 0.642 for duty-related deaths.

Early Retirement Factors								
Years Early	PERS 2/3, TRS 2/3, SERS 2/3	WSPRS 2, PERS 1, TRS 1	PSERS 2, PERS 1 TV, WSPRS 1/2 TV	LEOFF 2	LEOFF 2 Subsidized 3%*	PSERS 2 Subsidized 3%*	Plan 2/3 Subsidized**	Plan 2/3 Subsidized 5%**
	0	1.000	1.000	1.000	1.000	1.00	1.00	1.00
1	0.898	0.910	0.903	0.914	0.97	1.00	1.00	0.95
2	0.808	0.829	0.817	0.836	0.94	1.00	1.00	0.90
3	0.728	0.757	0.740	0.765	0.91	1.00	1.00	0.85
4	0.657	0.691	0.672	0.701	N/A	1.00	0.98	0.80
5	0.594	0.632	0.610	0.642	N/A	1.00	0.95	0.75
6	0.537	0.578	0.555	0.589	N/A	0.97	0.92	0.70
7	0.487	0.529	0.505	0.541	N/A	0.94	0.89	0.65
8	0.442	0.485	0.460	0.497	N/A	0.91	0.86	0.60
9	0.401	0.445	0.420	0.456	N/A	0.88	0.83	0.55
10	0.365	0.409	0.383	0.420	N/A	0.85	0.80	0.50
11	0.332	0.375	0.350	0.386	N/A	0.82	N/A	N/A
12	0.302	0.345	0.319	0.355	N/A	0.79	N/A	N/A
13	0.275	0.317	0.292	0.327	N/A	N/A	N/A	N/A
14	0.251	0.291	0.267	0.301	N/A	N/A	N/A	N/A
15	0.229	0.268	0.245	0.278	N/A	N/A	N/A	N/A
16	0.209	0.246	0.224	0.256	N/A	N/A	N/A	N/A
17	0.191	0.227	0.205	0.236	N/A	N/A	N/A	N/A
18	0.175	0.208	0.188	0.218	N/A	N/A	N/A	N/A
19	0.160	0.192	0.173	0.201	N/A	N/A	N/A	N/A
20	0.146	0.176	0.158	0.186	N/A	N/A	N/A	N/A
21	0.134	0.162	0.145	0.171	N/A	N/A	N/A	N/A
22	0.123	0.149	0.133	0.158	N/A	N/A	N/A	N/A
23	0.112	0.138	0.123	0.146	N/A	N/A	N/A	N/A
24	0.103	0.127	0.113	0.135	N/A	N/A	N/A	N/A
25	0.100	0.117	0.103	0.125	N/A	N/A	N/A	N/A
26	0.100	0.107	0.100	0.116	N/A	N/A	N/A	N/A
27	0.100	0.100	0.100	0.107	N/A	N/A	N/A	N/A
28	0.100	0.100	0.100	0.100	N/A	N/A	N/A	N/A
29	0.100	0.100	0.100	0.100	N/A	N/A	N/A	N/A
30+	0.100	0.100	0.100	0.100	N/A	N/A	N/A	N/A

From Normal Retirement Age. TV=Terminated Vested.

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

PSERS 2 members must be at least age 53 with 20 or more years of service to qualify.

**PERS 2/3, TRS 2/3, and SERS 2/3 members must be at least 55 with 30 or more years of service to qualify. Qualified members hired on or after 5/1/2013 will receive a 5% subsidized ERF.

Average Final Compensation Load	
System/Plan	Load
PERS 1	4.00%
TRS 1	0.75%
LEOFF 1	4.50%
WSPRS 1	7.00%

Reflects allowances for cashouts of annual and sick leave for calculation of Average Final Compensation.

Member/Beneficiary Age Difference (In Years)		
System	Male Member	Female Member
PERS	3	(1)
TRS	3	(1)
SERS	3	(1)
PSERS	3	(1)
LEOFF	3	(1)
WSPRS	3	(1)

Age difference is Member age minus Beneficiary age.

Certain and Life Annuities: Years Certain	
System	
PERS 1	4
PERS 2	4
TRS 1*	9
TRS 2	5
SERS 2	4
PSERS 2	4
LEOFF 1	3
LEOFF 2	5
WSPRS 1	4
WSPRS 2	5

**Only disabled members get this without a reduction in their benefit. The certain period applies to only the "annuity" portion of the benefit, typically 40% of the total benefit.*

Assumed Retirement Age from Inactive Status		
System	Plans	Retirement Age
PERS	1	65 (60 under certain circumstances)
	2	65 (55 if service >= 30 years)
	3	65 (55 if service >= 30 years)*
TRS	1	Same eligibility as if the member were active
	2	Same as PERS 2
	3	Same as PERS 3
SERS	2	Same as PERS 2
	3	Same as PERS 3
PSERS	2	Same eligibility as if the member were active
LEOFF	2	53 (50 if service >= 20 years)
WSPRS	1/2	60

**See table to the right if service is at least 20 years, but less than 30 years.*

Military Service	
	Increase Factor
PERS 1*	
Males	1.5%
Females	0.1%
WSPRS 1**	
Males	3.0%
Females	1.0%

Members with 25 years of service may receive up to 5 years of military service credit.

**Members of PERS Plan 1 may use certain prior military service as well as interruptive military service.*

***Members of WSPRS Plan 1 may use all prior military service as well as interruptive military service.*

Percent Plan 3 Members Deferring Retirement	
Member Age	Deferral Percent*
55	85%
56	85%
57	75%
58	75%
59	75%
60	60%
61	40%
62	40%
63	20%
64	15%

**Probability a Plan 3 member who terminates before age 65 with between 20 and 30 years of service will defer retirement until age 65.*

Duty-Related Death Assumption	
System	Duty Death Rate*
PERS	0.0018%
TRS	0.0008%
SERS	0.0018%
PSERS	0.0018%
LEOFF 1	0.0350%
LEOFF 2	0.0350%
WSPRS	0.0200%

**The duty death rate is a constant probability, regardless of age. The nonduty death rate is obtained by subtracting duty death rate from mortality rate for any given age.*

LEOFF 2 Duty-Related Disability Assumption	
Age	Duty Disability Rate*
20	97.25%
25	95.86%
30	94.50%
35	93.11%
40	91.75%
45	89.00%
50	86.25%
55+	83.50%

*Probability of disability being duty-related; geometrically interpolated between given values. Applies to LEOFF 2 only. Table represents a summary of rates.

Additional Duty-Related Assumptions for LEOFF 2	
Percent of disabilities assumed to be catastrophic	12%
Percent of deaths assumed to be caused by occupational diseases for fire fighters	
Age	Rate
20-49	14.74%
50-69	27.39%
Percent of Final Average Salary paid for catastrophic disability benefits (including offset adjustments).	44%

Average Ratio of Survivors of Inactive Deaths Selecting Annuities*			
System	Plan 1	Plan 2	Plan 3
PERS	59%	31%	40%
TRS	61%	39%	48%
SERS	N/A	33%	39%
PSERS	N/A	27%	N/A
LEOFF	100%	56%	N/A
WSPRS	64%	56%	N/A

*Refers to survivor who selects annuity payments (rather than a lump sum payment) if a currently terminated vested member dies before retirement age.

Joint and 100 Percent Survivor Option Factors*			
System	Plans	Male Members	Female Members
PERS	1	0.869	0.893
	2/3	0.780	0.828
TRS	1	0.893	0.914
	2/3	0.805	0.856
SERS	2/3	0.765	0.845
PSERS	2	0.797	0.826
LEOFF**	2	0.859	0.881
WSPRS**	1	0.944	0.956
WSPRS**	2	0.885	0.904

*Applied to on-going survivor benefits in the event of a pre-retirement death. Based on our member / beneficiary age difference assumptions and the option factors in WAC 415-02-380.

**Standard survivor benefits in LEOFF 1 are not reduced. WSPRS Plan 1 reductions apply for Option B. LEOFF Plan 2 and WSPRS Plan 2 reductions apply to non-duty death benefits only.

Employee Contribution Rates for Savings Fund Accrual	
System/Plans	Contribution Rate*
PERS 2	4.94%
TRS 2	6.19%
SERS 2	5.27%
PSERS 2	6.89%
LEOFF 2	8.41%
WSPRS 1/2	7.19%

This assumption helps us estimate the value of accumulated employee contributions with interest if a member elects a refund of contributions instead of a deferred retirement allowance upon termination.

*PERS 1 and TRS 1 employee rates are set in statute at 6%. No LEOFF 1 rates are required as long as the plan remains fully funded. Plan 3 members do not contribute to the defined benefit plan.

Medical Premium Reimbursement

- ◆ RCW 41.26.510(5) and RCW 43.43.285(2) (b) state that qualified survivors and children of line-of-duty deaths (Survivors) in LEOFF 2 and WSPRS shall have medical premiums reimbursed from the retirement fund. The laws also provide that all survivors will be covered by the Public Employees Benefits Board (PEBB).
- ◆ RCW 41.26.470(10) states that LEOFF 2 members with total disabilities (Disabilities) and qualified family members shall have medical premiums reimbursed from the retirement fund.

The costs for these benefits are included in the results presented in this report. However, the benefits are funded through irrevocable trust funds, known as 401(h) accounts, from contribution rates selected by the Department of Retirement Systems (DRS) and the LEOFF 2 Board. These contribution rates are “carved out” of the total adopted contribution rates. DRS and the LEOFF 2 Board will periodically review the funding requirements for these benefits and adjust the 401(h) contribution rates as necessary.

The information in the next section represents methods and assumptions tied directly to the medical premium reimbursement benefits. Please see the [2013 Other Post-Employment Benefits Actuarial Valuation Report](#) (OPEB Report) for the following referenced assumptions.

Medical Inflation

Current and Future Survivors, and Future Disabilities: Uniform Medical Plan (UMP) Medicare and Pre-Medicare assumptions without excise tax (OPEB report).

Current Disabilities: 5 percent per year.

Percent Married

Future Disabilities: 85 percent.

Current Disabilities: 100 percent.

Percent With Children

Disabilities and Survivors: 100 percent, one child each.

Premium Percentages

When the data for members currently qualifying for total disability benefits does not provide information about how many family members are covered, we use the assumptions below to split the total premium into each family member’s share.

Premium Percentages (Current Disabilities)	
Family Member	Percent of Total Premium
Primary	34%
Spouse	49%
Child	17%
All	100%

Assumed Coverage Type, Future Disabilities

Fifty percent covered by policies provided under the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA).

Fifty percent covered by employer-provided policies.

Assumed Timing/Length of Coverage

Assumed Timing/Length of Coverage			
Coverage Type	Beneficiary Type	Start of Coverage	End of Coverage
COBRA			
	Future Disabilities	Upon Benefit Commencement	2.5 Years after Commencement*
	Current Disabilities	Upon Benefit Commencement	29 Months after Commencement
Employer/PEBB			
	Survivors and Spouses of Disabilities	Upon Benefit Commencement	Age 65**
	Disabilities	Upon Benefit Commencement	29 Months after Commencement
	Child	Upon Benefit Commencement	10 Years after Commencement**
Medicare			
	Future Disabilities	2.5 Years after Commencement*	Paid for Life
	Current Disabilities	29 Months after Commencement	Paid for Life
	Survivors and Spouses of Disabilities	Age 65**	Paid for Life**
State-Provided Medicare Subsidy***			
	Current and Future Disabilities	29 Months After Commencement	Paid for Life

*Because of a limitation in the model, we assume 2 years for 50% of members, and 3 years for 50% of members, depending on member's age at benefit commencement.

**Benefits paid to spouses and child(ren) of Disabilities for the life of the member.

***Whether member is covered by COBRA or other means, we assume the member is also covered under the state's explicit Medicare subsidy.

Assumed Premiums

Disabilities			
<i>(Used for Future Disabilities and Current Disabilities Who Have Missing Values)</i>			
Coverage Type	Family Member	Category	Annual Premium
COBRA			
	Member	Pre-Medicare	\$10,376.62
	Spouse	Pre-Medicare	5,807.57
	Child	Pre-Medicare	\$3,058.40
Employer			
	Member	Pre-Medicare	\$12,895.81
		Medicare	7,854.30
	Spouse	Pre-Medicare	11,457.78
		Medicare	7,392.38
	Child	Pre-Medicare	\$3,962.35
Total Disabilities			
State-Provided Medicare Subsidy			
	Age	Annual Subsidy	
	Less than 25	\$6,472.80	
	25-27	4,084.80	
	28 and Above	\$1,156.80	
Future Survivors			
<i>(Covered under PEBB Options)</i>			
Family Member	Category	Annual Premium	
		Medical	Dental
Survivor			
	Pre-Medicare	\$6,549.96	\$556.08
	Medicare	\$2,630.88	\$556.08
Child			
	Pre-Medicare	\$4,856.88	\$556.08

Miscellaneous Assumptions/ Methods

We include the following miscellaneous assumptions and methods in this valuation.

- ◆ Minimum and maximum allowable ages are set in the data as follows.

	Non-Annuitants	Annuitants
Minimum Age	16	20
Maximum Age	80	110

- ◆ Default entry salaries, usually increased for past service, are assigned for active members with less than two months' service during the valuation year.
- ◆ Historical salaries for vested terminated members are not provided in the valuation data. Beginning with the 2008 valuation year, we first look to see if we kept a historical salary for such a member in the prior year's data. If so, we copy the salary to the current year's data. If a member was active in the prior year and terminated in the current year, we copy the prior year's salary to the current year's salary and keep it as historical.

Additionally, in 2009 we searched our data for actual salaries up to ten years prior for terminated vested members who did not already have historical salaries listed. To estimate salaries for the remaining terminated vested members, we use the following procedure. First, a salary

appropriate for the given system/plan and the member's total past service is assigned. These salaries are determined as of a given base year. Second, the salary is divided by the general salary increase assumption for each year the member has been inactive as measured from the base year. Please see the [2007-2012 Experience Study Report](#) for a record of the salaries used.

- ◆ While DRS reports salaries earned during the year prior to the valuation date, the salaries used in the first year of the valuation process have received an additional merit salary increase. In other words, the valuation software projects salaries to the coming year, beginning the day after the valuation date.
- ◆ All systems use a midyear decrement timing assumption.
- ◆ Members who receive a disability benefit are not assumed to return to active duty in the future.
- ◆ Disability and termination rates are discontinued after members are eligible to retire (with the exception of LEOFF and WSPRS disability rates).

- ◆ LEOFF Plan 1 and WSPRS Plan 1 use a slightly increased ratio of survivors selecting annuities over that displayed in the table presented earlier in this section. This assumption estimates the likelihood a qualified survivor will receive an ongoing benefit at the time of the member's death. The valuation software used also applies mortality assumptions to potential survivors, which results in an understatement of that future liability for those plans. To recognize this liability, we assume a 67 percent survivor annuity.
- ◆ We assume all survivors of currently retired WSPRS Plan 1 members who opted for the standard survivor benefit at retirement will receive an initial survivor benefit of 50 percent of the member's average final salary.
- ◆ We value the Basic Minimum COLA for PERS 1 and TRS 1 outside of our valuation software for members currently not receiving the benefit. The demographic assumptions we used to value this benefit provision were not updated for the *2007-12 Demographic Experience Study*.

Summary of Plan Provisions

The following tables present high-level summaries of the plan provisions and are not meant to be exhaustive lists. For complete details of plan provisions, please refer to the statutes shown in each table or contact the plan administrator, DRS. In the unlikely event that information contained in these tables conflicts with state law, the law takes precedence.

Summary of Plan Provisions - PERS			
	Plan 1	Plan 2	Plan 3
Effective Date of Plan	10/1/47	10/1/77	3/1/02
Date Closed to New Entrants	9/30/77	Open	Open
Statutory Reference	Chapter 41.40 RCW	Chapter 41.40 RCW	Chapter 41.40 RCW
Normal Retirement Eligibility (age/service)	60/5, 55/25, Any Age/30	65/5	65/10 or vested
Accrued Benefit Formula	2% x YOS x AFC; Maximum 60% AFC	2% x YOS x AFC	1% x YOS x AFC; 0.25% per month pre-retirement COLA with 20 years of service
Computation of AFC	Annual average of the greatest compensation earnable during a 24 consecutive month period	Average compensation earnable for the highest 60 consecutive months	Average compensation earnable for the highest 60 consecutive months
Credited Service	Monthly, based on hours worked each month (school yr. for edu. emplys.)	Monthly, based on hours worked each month (school yr. for edu. emplys.)	Monthly, based on hours worked each month (school yr. for edu. emplys.)
Vesting	5 years	5 years	10 years (5 under select circumstances)
Vested Benefits Upon Termination	Refund of employee contributions plus interest, or deferred retirement allowance	Refund of employee contributions plus interest, or deferred retirement allowance	Refund of employee contributions plus investment earnings and deferred retirement allowance
Early Retirement Eligibility (age/service)	n/a	55/20	55/10
Early Retirement Reduction Factors	n/a	3% or alternate subsidized ERF with 30 YOS (5% if hired on or after 5/1/13), otherwise actuarial	3% or alternate subsidized ERF with 30 YOS (5% if hired on or after 5/1/13), otherwise actuarial
Disability Retirement Benefit	Non-duty: reduced accrued benefit; Duty: temporary annuity plus deferred retirement allowance	Accrued benefit, actuarially reduced	Accrued benefit, actuarially reduced
COLA	\$2.12 per month/YOS* on 7/1/14	Lesser of CPI** or 3%	Lesser of CPI** or 3%
Minimum Benefit per Month	\$50.75* per YOS on 7/1/14, \$1,688.26* for select annuitants	n/a	n/a
Changes in Plan Provisions Since Last Valuation	n/a	n/a	Remove Annual Plan 3 Contribution Rate Change Provision (C 95 L 14)
Material Benefits not Included in this Valuation	We are not currently valuing portability with Seattle, Tacoma, & Spokane	We are not currently valuing portability with Seattle, Tacoma, & Spokane	We are not currently valuing portability with Seattle, Tacoma, & Spokane

*Minimum COLA payable to qualified members only; increases by 3% annually. The Uniform COLA was removed under C 362 L 11.

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

Summary of Plan Provisions - TRS (Continued)			
	Plan 1	Plan 2	Plan 3
Effective Date of Plan	3/1/38	10/1/77	7/1/96
Date Closed to New Entrants	9/30/77	Open	Open
Statutory Reference	Chapter 41.32 RCW	Chapter 41.32 RCW	Chapter 41.32 RCW
Normal Retirement Eligibility (age/service)	60/5, 55/25, Any Age/30	65/5	65/10 or vested
Accrued Benefit Formula	2% x YOS x AFC; Maximum 60% AFC	2% x YOS x AFC	1% x YOS x AFC; 0.25% per month pre-retirement COLA with 20 years of service
Computation of AFC	Annual average earnable compensation for the two highest consecutive service credit years	Average compensation earnable for the highest 60 consecutive months	Average compensation earnable for the highest 60 consecutive months
Credited Service	Yearly, based on days worked each year	Monthly, based on number of months and hours worked during school year	Monthly, based on number of months and hours worked during school year
Vesting	5 years	5 years	10 years (5 under select circumstances)
Vested Benefits Upon Termination	Refund of employee contributions plus interest, or deferred retirement allowance	Refund of employee contributions plus interest, or deferred retirement allowance	Refund of employee contributions plus investment earnings and deferred retirement allowance
Early Retirement Eligibility (age/service)	n/a	55/20	55/10
Early Retirement Reduction Factors	n/a	3% or alternate subsidized ERF with 30 YOS (5% if hired on or after 5/1/13), otherwise actuarial	3% or alternate subsidized ERF with 30 YOS (5% if hired on or after 5/1/13), otherwise actuarial
Disability Retirement Benefit	Accrued benefit	Accrued benefit, actuarially reduced	Accrued benefit, actuarially reduced
COLA	\$2.12 per month/YOS* on 7/1/14	Lesser of CPI** or 3%	Lesser of CPI** or 3%
Minimum Benefit per Month	\$50.75* per YOS on 7/1/14, \$1,688.26* for select annuitants	n/a	n/a
Changes in Plan Provisions Since Last Valuation	n/a	n/a	Remove Annual Plan 3 Contribution Rate Change Provision (C 95 L 14)
Material Benefits not Included in this Valuation	We are not currently valuing portability with Seattle, Tacoma, & Spokane	We are not currently valuing portability with Seattle, Tacoma, & Spokane	We are not currently valuing portability with Seattle, Tacoma, & Spokane

*Minimum COLA payable to qualified members only; increases by 3% annually. The Uniform COLA was removed under C 362 L 11.

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

Summary of Plan Provisions - SERS (Continued)		
	Plan 2	Plan 3
Effective Date of Plan	9/1/00	9/1/00
Date Closed to New Entrants	Open	Open
Statutory Reference	Chapter 41.35 RCW	Chapter 41.35 RCW
Normal Retirement Eligibility (age/service)	65/5	65/10 or vested
Accrued Benefit Formula	2% x YOS x AFC	1% x YOS x AFC; 0.25% per month pre-retirement COLA with 20 years of service
Computation of AFC	Average compensation earnable for the highest 60 consecutive months	Average compensation earnable for the highest 60 consecutive months
Credited Service	Monthly, based on number of months and hours worked during school year	Monthly, based on number of months and hours worked during school year
Vesting	5 years	10 years (5 under select circumstances)
Vested Benefits Upon Termination	Refund of employee contributions plus interest, or deferred retirement allowance	Refund of employee contributions plus investment earnings and deferred retirement allowance
Early Retirement Eligibility (age/service)	55/20	55/10
Early Retirement Reduction Factors	3% or alternate subsidized ERF with 30 YOS (5% if hired on or after 5/1/13), otherwise actuarial	3% or alternate subsidized ERF with 30 YOS (5% if hired on or after 5/1/13), otherwise actuarial
Disability Retirement Benefit	Accrued benefit, actuarially reduced	Accrued benefit, actuarially reduced
COLA	Lesser of CPI* or 3%	Lesser of CPI* or 3%
Minimum Benefit per Month per YOS	n/a	n/a
Changes in Plan Provisions Since Last Valuation	n/a	Remove Annual Plan 3 Contribution Rate Change Provision (C 95 L 14)
Material Benefits not Included in this Valuation	We are not currently valuing portability with Seattle, Tacoma, & Spokane	We are not currently valuing portability with Seattle, Tacoma, & Spokane

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

Summary of Plan Provision - PSERS <i>(Continued)</i>	
Plan 2	
Effective Date of Plan	7/1/06
Date Closed to New Entrants	Open
Statutory Reference	Chapter 41.37 RCW
Normal Retirement Eligibility (age/service)	65/5 Total Service, 60/10 PSERS service
Accrued Benefit Formula	2% x YOS x AFC
Computation of AFS	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 plus interest, or deferred retirement allowance
Early Retirement Eligibility (age/service)	53/20 Total Service
Early Retirement Reduction Factors	3% ERF with 20 YOS, otherwise actuarial
Disability Retirement Benefit	Accrued benefit, actuarially reduced from age 60
COLA	Lesser of CPI* or 3%
Minimum Benefit per Month per YOS	n/a
Changes in Plan Provisions Since Last Valuation	n/a
Material Benefits not Included in this Valuation	We are not currently valuing portability with Seattle, Tacoma, & Spokane

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

Summary of Plan Provisions - LEOFF		
<i>(Continued)</i>		
	Plan 1	Plan 2
Effective Date of Plan	3/1/70	10/1/77
Date Closed to New Entrants	9/30/77	Open
Statutory Reference	Chapter 41.26 RCW	Chapter 41.26 RCW
Normal Retirement Eligibility (age/service)	50/5	53/5
Accrued Benefit Formula	Accrual % (1%, 1.5%, 2%) x YOS (5, 10, 20) x FAS	2% x YOS x AFC; 0.25% per month pre-retirement COLA with 20 years of service
Computation of FAS/AFC	The basic salary attached to the position or rank at retirement if held for at least 12 months	Average compensation earnable for the highest 60 consecutive months
Credited Service	Monthly, based on hours worked each month	Monthly, based on hours worked each month
Vesting	5 years	5 years
Vested Benefits Upon Termination	Refund of employee contributions plus interest, or deferred retirement allowance	Refund of employee contributions (x 150% if 10 YOS) plus interest, or deferred retirement allowance
Early Retirement Eligibility (age/service)	n/a	50/20
Early Retirement Reduction Factors	n/a	3% ERF with 20 YOS
Disability Retirement Benefit	50% FAS, (max 60% if children)	Non-duty: accrued benefit, actuarially reduced; Duty, occupational: accrued benefit without actuarial reduction, minimum 10% of AFC; Duty, total: 70% of AFC with offsets for Social Security and L&I benefits, not to exceed 100% of AFC.
COLA	Full CPI*	Lesser of CPI* or 3%
Minimum Benefit per Month per YOS	n/a	n/a
Changes in Plan Provisions Since Last Valuation	n/a	Annuity Purchase (C 91 L 14); Definition of Firefighter (C 145 L 14)
Material Benefits not Included in this Valuation	None	We are not currently valuing portability with Seattle, Tacoma, & Spokane

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

Summary of Plan Provision - WSPRS (Continued)		
	Plan 1	Plan 2
Effective Date of Plan	6/12/47	1/1/03
Date Closed to New Entrants	12/31/02	Open
Statutory Reference	Chapter 43.43 RCW	Chapter 43.43 RCW
Normal Retirement Eligibility (age/service)	Age 55, Any Age/25, Mandatory at 65	Age 55, Any Age/25, Mandatory at 65
Accrued Benefit Formula	2% x YOS x AFC; Maximum 75% AFC	2% x YOS x AFC; Maximum 75% AFC
Computation of AFC	Average monthly salary of the highest two consecutive years	Average monthly salary of the highest 60 consecutive months
Credited Service	Monthly, based on hours worked each month	Monthly, based on hours worked each month
Vesting	5 years	5 years
Vested Benefits Upon Termination	Refund of employee contributions plus interest, or deferred retirement allowance	Refund of employee contributions plus interest, or deferred retirement allowance
Early Retirement Eligibility (age/service)	n/a	n/a
Early Retirement Reduction Factors	n/a	n/a
Disability Retirement Benefit	50% comp with offsets, paid from WSPRS operational funds	50% comp with offsets, paid from WSPRS operational funds
COLA	Lesser of CPI* or 3%	Lesser of CPI* or 3%
Minimum Benefit per Month per YOS**	\$31.91 on 1/1/14	\$31.91 on 1/1/14
Changes in Plan Provisions Since Last Valuation	n/a	n/a
Material Benefits not Included in this Valuation	We are not currently valuing portability with Seattle, Tacoma, & Spokane	We are not currently valuing portability with Seattle, Tacoma, & Spokane

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

**Amount increases by 3% annually.

Age/Service Distributions

Age and Service Distribution of Active Members (Number of Actives and Average Annual Salary)														
PERS Plan 1														
Attained Age	Attained Years of Service													
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 25	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
25-29	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
30-34	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
35-39	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
40-44	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
45-49	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
50-54	0	0	0	1	0	0	5	3	2	6	2	5	0	24
	\$0	\$0	\$0	*	\$0	\$0	\$26,624	\$69,860	\$68,814	\$67,058	\$71,929	\$65,568	\$0	\$59,923
55-59	5	14	5	10	10	123	144	186	206	190	123	346	18	1,380
	\$30,975	\$36,525	\$39,218	\$32,628	\$52,754	\$45,812	\$44,404	\$49,530	\$51,851	\$55,782	\$62,765	\$63,118	\$70,706	\$54,398
60-64	15	23	26	25	31	223	267	332	450	411	274	605	201	2,883
	\$40,285	\$41,372	\$41,019	\$44,222	\$47,902	\$46,035	\$50,381	\$49,583	\$54,033	\$57,232	\$63,638	\$66,657	\$62,887	\$56,758
65-69	5	12	13	7	14	112	109	108	140	143	89	195	137	1,084
	\$35,977	\$42,556	\$47,024	\$41,512	\$39,350	\$46,692	\$52,442	\$54,802	\$59,600	\$62,015	\$63,688	\$64,169	\$67,049	\$58,659
70 & Over	0	5	2	6	2	34	29	19	31	31	20	58	45	282
	\$0	\$63,990	\$28,734	\$32,912	\$20,483	\$33,850	\$47,142	\$52,539	\$53,757	\$54,103	\$52,723	\$44,453	\$66,617	\$50,022
Total	25	54	46	49	57	492	554	648	829	781	508	1,209	401	5,653
	\$37,561	\$42,473	\$41,986	\$40,891	\$45,690	\$45,287	\$48,849	\$50,618	\$54,457	\$57,706	\$63,038	\$64,173	\$65,078	\$56,224

Average:	Age	62.2	Number of Participants:	Vested	5,389	Males	2,089	Early Retirement Eligible:	0
	Service	24.5		Not Vested	264	Females	3,564	Normal Retirement Eligible:	4,753

*Annual Salary omitted for privacy reasons.

Note: Numbers of participants eligible for early and normal retirement are estimates only.

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

PERS 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	820	649	231	93	47	42	0	0	0	0	0	0	0	0	1,882
	\$33,518	\$31,869	\$35,741	\$35,569	\$38,376	\$39,017	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33,567
25-29	905	1,328	791	600	446	1,367	31	0	0	0	0	0	0	0	5,468
	\$37,494	\$38,028	\$42,169	\$45,256	\$46,443	\$49,246	\$52,146	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,903
30-34	717	1,152	751	652	566	3,811	1,074	37	0	0	0	0	0	0	8,760
	\$39,187	\$43,269	\$47,060	\$48,140	\$53,154	\$53,712	\$56,319	\$57,022	\$0	\$0	\$0	\$0	\$0	\$0	\$50,462
35-39	581	865	597	511	459	3,793	3,180	841	15	0	0	0	0	0	10,842
	\$40,831	\$44,680	\$50,348	\$50,767	\$55,532	\$56,926	\$60,622	\$60,481	\$64,045	\$0	\$0	\$0	\$0	\$0	\$55,745
40-44	523	799	617	522	426	3,694	3,829	2,588	802	13	0	0	0	0	13,813
	\$40,305	\$44,163	\$49,747	\$54,158	\$52,230	\$57,383	\$61,716	\$64,438	\$64,564	\$60,807	\$0	\$0	\$0	\$0	\$58,293
45-49	401	670	528	427	360	3,418	3,680	2,919	2,377	653	14	0	0	0	15,447
	\$40,859	\$45,524	\$50,710	\$53,045	\$50,747	\$56,533	\$61,890	\$64,709	\$67,164	\$64,138	\$62,273	\$0	\$0	\$0	\$60,002
50-54	430	643	487	447	434	3,419	3,759	3,200	3,295	2,155	838	38	0	0	19,145
	\$39,488	\$47,503	\$49,261	\$53,872	\$54,970	\$56,544	\$60,122	\$63,566	\$68,004	\$70,103	\$65,683	\$64,075	\$0	\$0	\$61,364
55-59	318	529	380	382	351	2,856	3,482	3,319	3,593	2,845	1,863	272	0	0	20,190
	\$43,188	\$51,091	\$48,930	\$53,811	\$54,956	\$55,042	\$60,178	\$62,374	\$67,054	\$70,672	\$72,895	\$70,685	\$0	\$0	\$62,901
60-64	148	290	218	234	212	1,961	2,453	2,539	2,963	2,249	1,323	248	0	0	14,838
	\$41,363	\$48,536	\$46,766	\$51,134	\$53,726	\$55,099	\$58,634	\$61,707	\$64,944	\$68,339	\$71,862	\$71,471	\$0	\$0	\$62,085
65-69	48	65	72	57	85	712	791	766	846	636	333	39	0	0	4,450
	\$35,747	\$41,308	\$45,818	\$48,098	\$48,308	\$54,566	\$58,971	\$61,283	\$62,294	\$68,201	\$68,637	\$72,897	\$0	\$0	\$60,396
70 & Over	16	23	27	30	21	171	178	144	133	100	61	12	0	0	916
	\$50,522	\$46,844	\$35,409	\$45,461	\$41,740	\$43,428	\$51,682	\$53,179	\$55,792	\$59,661	\$63,898	\$65,958	\$0	\$0	\$51,792
Total	4,907	7,013	4,699	3,955	3,407	25,244	22,457	16,353	14,024	8,651	4,432	609	0	0	115,751
	\$38,732	\$42,902	\$47,141	\$50,422	\$52,284	\$55,444	\$60,300	\$63,005	\$66,310	\$69,107	\$70,746	\$70,641	\$0	\$0	\$58,388

Average:	Age	48.4	Number of Participants:	Vested	89,387	Males	55,563	Early Retirement Eligible:	15,495
	Service	12.6		Not Vested	26,364	Females	60,188	Normal Retirement Eligible:	4,932

*Annual Salary omitted for privacy reasons.

Note: Numbers of participants eligible for early and normal retirement are estimates only.

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

PERS Plan 3

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	569	468	145	53	19	16	0	0	0	0	0	0	0	0	1,270
	\$31,603	\$29,245	\$32,336	\$34,562	\$32,982	\$40,932	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$31,080
25-29	475	795	496	345	220	629	8	0	0	0	0	0	0	0	2,968
	\$34,939	\$37,365	\$39,808	\$42,508	\$43,465	\$46,728	\$42,615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,434
30-34	370	543	407	331	261	1,813	202	0	0	0	0	0	0	0	3,927
	\$37,211	\$41,791	\$45,162	\$47,420	\$49,426	\$53,675	\$56,012	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,909
35-39	237	418	275	228	194	1,581	522	92	3	0	0	0	0	0	3,550
	\$38,217	\$42,408	\$44,652	\$48,292	\$53,504	\$55,659	\$61,081	\$66,639	\$53,106	\$0	\$0	\$0	\$0	\$0	\$52,570
40-44	204	328	238	192	158	1,340	588	399	128	3	0	0	0	0	3,578
	\$41,126	\$44,116	\$46,979	\$47,929	\$51,014	\$58,081	\$61,820	\$67,925	\$67,467	\$91,286	\$0	\$0	\$0	\$0	\$56,315
45-49	149	256	199	163	142	1,114	461	413	524	100	2	0	0	0	3,523
	\$39,396	\$42,286	\$45,967	\$50,744	\$52,495	\$56,177	\$62,666	\$68,842	\$71,843	\$73,450	\$76,041	\$0	\$0	\$0	\$58,647
50-54	143	234	160	156	148	1,044	481	394	630	442	126	6	0	0	3,964
	\$40,962	\$42,597	\$46,806	\$48,433	\$48,417	\$56,510	\$61,366	\$67,170	\$72,016	\$74,832	\$72,838	\$69,994	\$0	\$0	\$60,812
55-59	102	170	114	117	105	887	404	346	589	484	292	43	0	0	3,653
	\$39,866	\$44,240	\$44,161	\$53,193	\$54,104	\$55,166	\$59,567	\$63,305	\$68,498	\$75,034	\$73,499	\$75,909	\$0	\$0	\$61,542
60-64	62	113	75	65	67	515	272	217	338	280	146	28	0	0	2,178
	\$38,283	\$45,206	\$50,684	\$48,317	\$51,468	\$54,714	\$60,070	\$62,419	\$64,679	\$68,960	\$71,352	\$73,783	\$0	\$0	\$59,499
65-69	20	20	35	29	16	193	73	49	72	48	20	2	0	0	577
	\$41,874	\$41,404	\$46,763	\$52,556	\$73,539	\$55,011	\$60,883	\$58,769	\$65,593	\$63,702	\$69,479	\$74,144	\$0	\$0	\$57,647
70 & Over	3	6	10	12	10	38	17	5	6	5	2	0	0	0	114
	\$27,107	\$46,183	\$35,605	\$37,379	\$38,823	\$56,449	\$49,791	\$73,013	\$59,790	\$80,662	\$60,433	\$0	\$0	\$0	\$50,796
Total	2,334	3,351	2,154	1,691	1,340	9,170	3,028	1,915	2,290	1,362	588	79	0	0	29,302
	\$36,367	\$39,632	\$43,519	\$47,055	\$49,883	\$55,031	\$60,763	\$66,226	\$69,476	\$73,260	\$72,652	\$74,662	\$0	\$0	\$53,948

Average:	Age	43.6	Number of Participants:	Vested	12,297	Males	13,723	Early Retirement Eligible:	3,522
	Service	8.7		Not Vested	17,005	Females	15,579	Normal Retirement Eligible:	511

*Annual Salary omitted for privacy reasons.

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

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

(Continued)

TRS Plan 1

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	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
25-29	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
30-34	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
35-39	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
40-44	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
45-49	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
50-54	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
55-59	0	0	2	1	1	8	15	20	25	46	56	129	0		303
	\$0	\$0	\$65,292	*	*	\$63,022	\$68,076	\$69,552	\$70,593	\$76,872	\$78,532	\$81,286	\$0		\$77,120
60-64	0	0	1	1	2	31	63	92	185	219	224	512	109		1,439
	\$0	\$0	*	*	\$83,088	\$56,722	\$65,820	\$68,846	\$74,764	\$75,918	\$79,588	\$77,779	\$81,231		\$76,096
65-69	0	1	1	0	0	14	23	37	82	87	72	114	124		555
	\$0	*	*	\$0	\$0	\$57,809	\$65,862	\$67,401	\$73,489	\$77,211	\$85,015	\$79,588	\$81,105		\$77,394
70 & Over	0	0	0	1	1	6	5	9	11	7	9	14	33		96
	\$0	\$0	\$0	*	*	\$78,923	\$73,460	\$72,182	\$76,051	\$76,965	\$69,398	\$74,949	\$81,650		\$76,644
Total	0	1	4	3	4	59	106	158	303	359	361	769	266		2,393
	\$0	*	\$61,773	\$58,177	\$76,041	\$60,092	\$66,509	\$68,787	\$74,122	\$76,374	\$80,253	\$78,584	\$81,224		\$76,549

Average:	Age	63.0	Number of Participants:	Vested	2,379	Males	550	Early Retirement Eligible:	0
	Service	30.1		Not Vested	14	Females	1,843	Normal Retirement Eligible:	2,313

*Annual Salary omitted for privacy reasons.

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

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

TRS 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	21	146	28	1	0	1	0	0	0	0	0	0	0	0	197
	\$47,560	\$48,350	\$41,855	*	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$47,394
25-29	49	677	435	370	180	267	0	0	0	0	0	0	0	0	1,978
	\$54,249	\$52,285	\$46,093	\$46,275	\$46,932	\$48,789	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,889
30-34	34	394	270	282	181	526	0	0	0	0	0	0	0	0	1,687
	\$54,790	\$54,760	\$49,610	\$49,860	\$51,078	\$51,350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,659
35-39	29	178	147	165	101	273	0	0	0	0	0	0	0	0	893
	\$56,511	\$55,928	\$49,307	\$50,523	\$53,305	\$54,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$53,005
40-44	16	167	104	89	81	237	52	224	46	0	0	0	0	0	1,016
	\$52,853	\$54,494	\$51,495	\$54,864	\$51,403	\$55,060	\$69,993	\$77,244	\$76,767	\$0	\$0	\$0	\$0	\$0	\$60,897
45-49	8	109	97	87	88	256	143	265	266	21	0	0	0	0	1,340
	\$51,301	\$58,290	\$52,292	\$52,573	\$54,334	\$57,367	\$66,445	\$75,035	\$76,152	\$78,656	\$0	\$0	\$0	\$0	\$65,053
50-54	20	100	71	82	62	253	183	271	323	181	22	0	0	0	1,568
	\$62,216	\$55,615	\$54,389	\$58,879	\$54,591	\$57,869	\$67,067	\$73,632	\$74,721	\$77,723	\$79,803	\$0	\$0	\$0	\$67,415
55-59	10	47	53	41	44	175	152	319	387	231	187	24	0	0	1,670
	\$64,844	\$64,010	\$52,917	\$58,042	\$59,252	\$59,140	\$67,979	\$72,937	\$74,126	\$77,603	\$77,394	\$83,351	\$0	\$0	\$70,948
60-64	4	23	23	19	22	89	79	236	406	205	132	15	0	0	1,253
	\$55,749	\$68,258	\$59,920	\$57,567	\$71,758	\$65,614	\$68,946	\$73,151	\$75,530	\$75,049	\$77,242	\$74,873	\$0	\$0	\$73,235
65-69	0	3	4	7	6	19	18	87	165	62	37	7	0	0	415
	\$0	\$63,612	\$48,602	\$65,916	\$84,558	\$60,286	\$76,621	\$73,740	\$74,200	\$75,767	\$82,855	\$79,257	\$0	\$0	\$74,349
70 & Over	0	2	1	2	1	2	6	3	20	12	4	1	0	0	54
	\$0	\$62,651	*	\$59,928	*	\$57,863	\$62,410	\$73,018	\$74,816	\$76,253	\$67,988	*	\$0	\$0	\$70,720
Total	191	1,846	1,233	1,145	766	2,098	633	1,405	1,613	712	382	47	0	0	12,071
	\$55,133	\$54,115	\$49,134	\$50,571	\$52,426	\$54,669	\$67,848	\$74,239	\$75,024	\$76,747	\$77,911	\$79,806	\$0	\$0	\$61,320

Average: Age 44.5 Number of Participants: Vested 6,062 Males 2,881 Early Retirement Eligible: 1,655
 Service 10.1 Not Vested 6,009 Females 9,190 Normal Retirement Eligible: 445

*Annual Salary omitted for privacy reasons.

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

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

TRS Plan 3

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	9	152	35	4	0	0	0	0	0	0	0	0	0	0	200
	\$46,797	\$47,485	\$42,410	\$39,473	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$46,406
25-29	64	634	437	397	241	503	0	0	0	0	0	0	0	0	2,276
	\$52,289	\$51,702	\$46,246	\$47,594	\$47,973	\$49,678	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,112
30-34	39	353	294	342	316	3,674	552	0	0	0	0	0	0	0	5,570
	\$61,520	\$54,100	\$50,083	\$50,245	\$51,180	\$55,545	\$61,754	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$55,249
35-39	26	198	189	200	184	2,783	3,617	361	0	0	0	0	0	0	7,558
	\$66,619	\$55,555	\$52,087	\$53,413	\$53,213	\$58,529	\$67,441	\$77,878	\$0	\$0	\$0	\$0	\$0	\$0	\$63,242
40-44	32	176	132	131	135	1,879	2,794	2,605	325	1	0	0	0	0	8,210
	\$59,405	\$57,544	\$56,517	\$54,212	\$52,693	\$59,710	\$68,509	\$77,856	\$79,834	*	\$0	\$0	\$0	\$0	\$68,959
45-49	32	131	106	90	97	1,273	1,604	1,712	1,891	233	0	0	0	0	7,169
	\$65,859	\$56,568	\$51,058	\$52,089	\$52,585	\$60,054	\$68,591	\$75,940	\$79,128	\$79,809	\$0	\$0	\$0	\$0	\$71,059
50-54	10	66	67	75	67	1,047	1,476	1,188	1,561	1,489	262	0	0	0	7,308
	\$75,767	\$54,711	\$52,878	\$54,819	\$55,881	\$59,497	\$68,347	\$75,460	\$77,931	\$80,212	\$82,779	\$0	\$0	\$0	\$72,709
55-59	15	47	33	38	42	768	1,334	1,162	1,377	1,140	1,257	150	0	0	7,363
	\$79,190	\$63,819	\$63,112	\$55,572	\$55,386	\$60,032	\$68,024	\$75,044	\$76,828	\$77,938	\$79,656	\$83,191	\$0	\$0	\$73,612
60-64	8	20	13	24	18	417	845	875	1,037	694	590	116	0	0	4,657
	\$66,727	\$60,576	\$53,256	\$58,057	\$58,095	\$62,302	\$68,638	\$73,372	\$75,627	\$78,149	\$79,024	\$82,373	\$0	\$0	\$73,415
65-69	2	0	2	6	5	97	220	216	246	171	94	17	0	0	1,076
	\$78,245	\$0	\$46,964	\$56,180	\$67,645	\$65,867	\$69,491	\$74,714	\$74,506	\$78,775	\$79,060	\$83,129	\$0	\$0	\$73,778
70 & Over	0	0	1	1	1	13	24	12	17	7	7	1	0	0	84
	\$0	\$0	*	*	*	\$58,775	\$72,000	\$68,190	\$67,876	\$78,298	\$69,705	*	\$0	\$0	\$68,070
Total	237	1,777	1,309	1,308	1,106	12,454	12,466	8,131	6,454	3,735	2,210	284	0	0	51,471
	\$61,364	\$53,716	\$50,115	\$51,006	\$51,745	\$57,983	\$67,872	\$76,121	\$77,615	\$79,040	\$79,801	\$82,823	\$0	\$0	\$67,664

Average:	Age	46.1	Number of Participants:	Vested	35,357	Males	14,886	Early Retirement Eligible:	10,829
	Service	13.7		Not Vested	16,114	Females	36,585	Normal Retirement Eligible:	1,141

*Annual Salary omitted for privacy reasons.

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

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

SERS 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	91	134	56	17	10	10	0	0	0	0	0	0	0	0	318
	\$20,715	\$20,017	\$23,291	\$25,968	\$20,451	\$27,465	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,360
25-29	85	255	149	103	69	98	1	0	0	0	0	0	0	0	760
	\$22,203	\$21,720	\$26,470	\$28,649	\$27,964	\$28,800	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,131
30-34	107	256	132	93	63	186	54	4	0	0	0	0	0	0	895
	\$20,430	\$22,450	\$26,546	\$28,859	\$28,992	\$32,694	\$41,898	\$49,770	\$0	\$0	\$0	\$0	\$0	\$0	\$27,363
35-39	117	324	181	146	106	236	123	89	2	0	0	0	0	0	1,324
	\$18,954	\$20,797	\$26,386	\$29,293	\$26,231	\$28,820	\$35,906	\$37,867	\$20,827	\$0	\$0	\$0	\$0	\$0	\$26,751
40-44	166	389	253	214	180	411	273	204	60	1	0	0	0	0	2,151
	\$19,392	\$20,139	\$23,841	\$24,644	\$24,923	\$27,858	\$35,200	\$37,737	\$37,671	*	\$0	\$0	\$0	\$0	\$26,918
45-49	140	354	260	223	184	526	531	411	164	41	1	0	0	0	2,835
	\$18,316	\$20,159	\$23,216	\$24,277	\$24,176	\$28,224	\$32,187	\$34,790	\$40,157	\$45,724	*	\$0	\$0	\$0	\$28,338
50-54	116	303	225	221	183	521	927	936	407	136	45	5	0	0	4,025
	\$18,542	\$21,206	\$25,740	\$24,652	\$25,313	\$27,337	\$28,658	\$31,968	\$36,577	\$42,014	\$52,566	\$45,503	\$0	\$0	\$29,409
55-59	93	242	192	160	150	489	925	1,242	815	209	81	18	0	0	4,616
	\$17,919	\$24,376	\$24,349	\$25,327	\$24,901	\$25,708	\$28,287	\$30,619	\$31,581	\$38,254	\$46,416	\$59,336	\$0	\$0	\$29,323
60-64	62	130	123	90	104	286	527	811	743	337	105	16	0	0	3,334
	\$18,078	\$21,898	\$25,008	\$23,320	\$25,235	\$26,776	\$29,534	\$29,828	\$31,268	\$38,340	\$44,452	\$46,542	\$0	\$0	\$30,217
65-69	21	46	39	32	43	113	150	263	225	140	70	10	0	0	1,152
	\$18,298	\$17,800	\$19,092	\$26,954	\$21,721	\$26,691	\$30,444	\$31,888	\$32,195	\$36,276	\$38,899	\$44,063	\$0	\$0	\$30,555
70 & Over	5	13	15	19	12	35	47	86	58	35	22	3	0	0	350
	\$17,422	\$18,004	\$17,677	\$18,334	\$18,371	\$19,909	\$23,453	\$28,652	\$29,081	\$32,273	\$33,120	\$30,510	\$0	\$0	\$25,871
Total	1,003	2,446	1,625	1,318	1,104	2,911	3,558	4,046	2,474	899	324	52	0	0	21,760
	\$19,311	\$21,219	\$24,707	\$25,683	\$25,201	\$27,640	\$30,177	\$31,774	\$33,014	\$38,655	\$44,095	\$49,469	\$0	\$0	\$28,620

Average:	Age	51.1	Number of Participants:	Vested	13,494	Males	5,134	Early Retirement Eligible:	2,352
	Service	10.8		Not Vested	8,266	Females	16,626	Normal Retirement Eligible:	1,264

*Annual Salary omitted for privacy reasons.

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

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

SERS Plan 3

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	56	166	57	31	9	8	0	0	0	0	0	0	0	0	327
	\$19,500	\$20,135	\$21,548	\$24,493	\$19,236	\$30,487	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,914
25-29	95	286	148	121	78	245	4	0	0	0	0	0	0	0	977
	\$19,964	\$21,574	\$26,042	\$26,852	\$27,189	\$31,847	\$40,719	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,851
30-34	71	214	152	132	90	590	143	1	0	0	0	0	0	0	1,393
	\$18,729	\$22,078	\$26,991	\$28,279	\$26,192	\$32,479	\$35,258	*	\$0	\$0	\$0	\$0	\$0	\$0	\$29,114
35-39	92	259	149	137	109	725	291	40	2	0	0	0	0	0	1,804
	\$18,664	\$21,052	\$23,910	\$28,182	\$24,947	\$30,231	\$37,274	\$44,038	\$59,561	\$0	\$0	\$0	\$0	\$0	\$28,801
40-44	121	330	238	231	200	1,237	547	161	62	2	0	0	0	0	3,129
	\$18,077	\$19,083	\$23,481	\$24,507	\$22,278	\$27,455	\$33,921	\$44,896	\$44,375	\$80,029	\$0	\$0	\$0	\$0	\$27,755
45-49	109	299	246	233	211	1,844	1,083	323	208	50	1	0	0	0	4,607
	\$16,391	\$18,863	\$22,846	\$23,743	\$22,616	\$26,084	\$31,085	\$36,776	\$44,106	\$50,113	*	\$0	\$0	\$0	\$27,949
50-54	85	228	207	210	195	2,089	1,697	706	526	175	76	4	0	0	6,198
	\$17,220	\$20,346	\$21,846	\$22,111	\$20,891	\$26,235	\$29,533	\$32,689	\$40,784	\$50,364	\$56,077	\$42,232	\$0	\$0	\$29,371
55-59	65	151	124	128	115	1,462	1,421	1,034	1,063	372	170	28	0	0	6,133
	\$17,068	\$20,770	\$22,116	\$21,939	\$23,860	\$26,908	\$29,518	\$30,959	\$33,668	\$44,658	\$48,412	\$58,712	\$0	\$0	\$30,672
60-64	24	66	47	72	77	886	797	609	977	516	141	21	0	0	4,233
	\$16,507	\$21,113	\$26,114	\$22,034	\$20,533	\$26,928	\$29,374	\$31,197	\$32,756	\$37,783	\$44,348	\$44,764	\$0	\$0	\$30,981
65-69	7	26	12	25	28	341	279	136	288	166	85	10	0	0	1,403
	\$19,256	\$19,959	\$20,760	\$20,643	\$19,080	\$25,960	\$30,173	\$31,996	\$32,223	\$34,070	\$36,336	\$42,239	\$0	\$0	\$29,952
70 & Over	7	11	10	8	10	116	90	19	30	15	14	1	0	0	331
	\$14,857	\$16,402	\$17,870	\$23,478	\$15,820	\$22,860	\$25,411	\$26,597	\$25,176	\$29,619	\$28,178	*	\$0	\$0	\$23,944
Total	732	2,036	1,390	1,328	1,122	9,543	6,352	3,029	3,156	1,296	487	64	0	0	30,535
	\$18,056	\$20,381	\$23,652	\$24,501	\$22,896	\$27,318	\$30,612	\$32,987	\$35,274	\$41,426	\$45,817	\$50,835	\$0	\$0	\$29,195

Average: Age 50.6 Number of Participants: Vested 20,282 Males 6,755 Early Retirement Eligible: 7,187
Service 10.7 Not Vested 10,253 Females 23,780 Normal Retirement Eligible: 1,564

*Annual Salary omitted for privacy reasons.

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

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

(Continued)

PSERS 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	38	39	20	8	0	2	0	0	0	0	0	0	0	0	107
	\$38,683	\$39,163	\$46,903	\$49,335	\$0	\$55,019	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,496
25-29	85	130	79	45	42	230	0	0	0	0	0	0	0	611	
	\$39,439	\$41,583	\$47,665	\$49,893	\$55,098	\$54,254	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,382	
30-34	50	82	76	44	61	489	0	0	0	0	0	0	0	802	
	\$39,673	\$42,911	\$49,034	\$50,879	\$53,239	\$55,354	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,099	
35-39	19	51	44	37	40	458	0	0	0	0	0	0	0	649	
	\$40,559	\$45,211	\$50,562	\$51,333	\$55,326	\$58,911	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$56,078	
40-44	33	42	26	35	41	561	0	0	0	0	0	0	0	738	
	\$40,962	\$42,832	\$46,511	\$55,606	\$56,814	\$61,585	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,516	
45-49	19	25	28	29	29	537	0	0	0	0	0	0	0	667	
	\$39,865	\$44,690	\$49,231	\$58,148	\$56,197	\$62,812	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60,419	
50-54	11	18	21	20	17	435	0	0	0	0	0	0	0	522	
	\$40,742	\$46,962	\$50,899	\$50,948	\$54,410	\$64,403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$61,919	
55-59	4	8	10	11	12	280	0	0	0	0	0	0	0	325	
	\$40,236	\$58,434	\$47,581	\$50,353	\$53,529	\$62,822	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$61,202	
60-64	1	1	0	4	5	65	0	0	0	0	0	0	0	76	
	*	*	\$0	\$56,848	\$48,168	\$58,181	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$57,015	
65-69	1	0	1	3	0	11	0	0	0	0	0	0	0	16	
	*	\$0	*	\$56,163	\$0	\$53,715	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$53,702	
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	261	396	305	236	247	3,068	0	4,513							
	\$39,789	\$42,989	\$48,666	\$52,454	\$54,826	\$60,266	\$0	\$56,075							

Average: Age 40.4 Number of Participants: Vested 2,784 Males 3,388 Early Retirement Eligible: 209
Service 4.8 Not Vested 1,729 Females 1,125 Normal Retirement Eligible: 12

*Annual Salary omitted for privacy reasons.

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

Age and Service Distribution of Active Law Enforcement Officers
(Number of Actives and Average Annual Salary)

(Continued)

LEOFF Plan 1

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	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
25-29	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
30-34	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
35-39	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
40-44	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
45-49	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
50-54	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
55-59	0	0	0	0	0	0	0	0	0	2	3	13	0		18
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,682	\$78,073	\$88,451	\$0		\$85,414
60-64	0	0	0	0	0	0	0	0	0	2	1	17	7		27
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$82,021	*	\$96,534	\$101,965		\$96,623
65-69	0	0	0	0	0	0	0	0	0	0	0	6	15		21
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$108,720	\$103,788		\$105,197
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	1		1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*		*
Total	0	0	0	0	0	0	0	0	0	4	4	36	23		67
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$79,351	\$81,036	\$95,646	\$103,209	\$96,397

Average:	Age	62.4	Number of Participants:	Vested	67	Males	65	Early Retirement Eligible:	N/A
	Service	38.0		Not Vested	0	Females	2	Normal Retirement Eligible:	67

*Annual Salary omitted for privacy reasons.

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

Age and Service Distribution of Active Fire Fighters
(Number of Actives and Average Annual Salary)
(Continued)

LEOFF Plan 1

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	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
25-29	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
30-34	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
35-39	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
40-44	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
45-49	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
50-54	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
55-59	0	0	0	0	0	0	0	0	0	0	0	1	21	0	22
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$115,024	\$0	\$115,753
60-64	0	0	0	0	0	0	0	0	0	0	0	0	30	14	44
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$102,419	\$114,846	\$106,373
65-69	0	0	0	0	0	0	0	0	0	0	0	1	3	5	9
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$89,270	\$124,519	\$111,676
70 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	*
Total	0	0	0	0	0	0	0	0	0	0	0	2	54	20	76
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$122,869	\$106,590	\$116,025	\$109,501

Average:	Age	61.3	Number of Participants:	Vested	76	Males	76	Early Retirement Eligible:	N/A
	Service	38.3		Not Vested	0	Females	0	Normal Retirement Eligible:	76

*Annual Salary omitted for privacy reasons.

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

Age and Service Distribution of Active Law Enforcement Officers
(Number of Actives and Average Annual Salary)
(Continued)

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	25	20	7	0	0	0	0	0	0	0	0	0	0	0	52
	\$54,455	\$58,993	\$79,863	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$59,621
25-29	82	82	53	43	61	198	0	0	0	0	0	0	0	519	
	\$57,855	\$60,910	\$66,635	\$72,571	\$78,977	\$83,268	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72,631	
30-34	40	57	48	73	77	707	89	0	0	0	0	0	0	1,091	
	\$57,595	\$64,958	\$70,367	\$78,792	\$80,393	\$86,694	\$86,995	\$0	\$0	\$0	\$0	\$0	\$0	\$82,825	
35-39	25	39	32	34	43	530	537	121	0	0	0	0	0	1,361	
	\$57,554	\$65,380	\$72,674	\$79,028	\$82,412	\$86,048	\$91,745	\$96,251	\$0	\$0	\$0	\$0	\$0	\$87,483	
40-44	23	23	21	20	28	363	579	674	127	0	0	0	0	1,858	
	\$57,507	\$63,847	\$77,162	\$72,068	\$82,099	\$83,547	\$90,665	\$95,883	\$105,782	\$0	\$0	\$0	\$0	\$90,976	
45-49	3	10	8	11	7	153	271	501	620	129	0	0	0	1,713	
	\$72,096	\$60,014	\$77,919	\$82,520	\$73,134	\$84,378	\$92,392	\$98,112	\$102,546	\$107,201	\$0	\$0	\$0	\$97,705	
50-54	1	5	2	6	5	61	123	199	397	409	81	1	0	1,290	
	*	\$70,847	\$66,748	\$82,112	\$95,635	\$79,085	\$91,232	\$94,504	\$102,196	\$110,032	\$112,354	*	\$0	\$101,685	
55-59	4	0	5	5	1	28	38	84	134	192	218	26	0	735	
	\$68,858	\$0	\$77,944	\$121,683	*	\$83,484	\$83,741	\$92,065	\$98,747	\$106,422	\$115,393	\$116,968	\$0	\$104,151	
60-64	0	1	1	2	0	12	14	34	36	63	90	21	0	274	
	\$0	*	*	\$74,439	\$0	\$84,359	\$94,766	\$86,439	\$95,420	\$98,510	\$109,201	\$106,827	\$0	\$99,723	
65-69	0	1	0	0	0	3	4	3	5	12	9	1	0	38	
	\$0	*	\$0	\$0	\$0	\$69,316	\$80,458	\$74,196	\$68,637	\$97,354	\$100,336	*	\$0	\$88,380	
70 & Over	0	0	0	0	0	0	1	0	0	0	1	0	0	2	
	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	*	\$0	\$0	\$117,743	
Total	203	238	177	194	222	2,055	1,656	1,616	1,319	805	399	49	0	8,933	
	\$57,764	\$63,002	\$71,630	\$78,136	\$81,092	\$85,161	\$91,010	\$95,994	\$102,043	\$107,627	\$113,047	\$112,710	\$0	\$92,384	

Average:	Age	43.4	Number of Participants:	Vested	7,692	Males	8,085	Early Retirement Eligible:	560
	Service	14.4		Not Vested	1,241	Females	848	Normal Retirement Eligible:	1,470

*Annual Salary omitted for privacy reasons.

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

Age and Service Distribution of Active Fire Fighters
(Number of Actives and Average Annual Salary)
(Continued)

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	21	18	6	2	1	0	0	0	0	0	0	0	0	0	48
	\$57,006	\$60,915	\$63,868	\$77,285	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$59,779
25-29	26	67	70	45	69	173	0	0	0	0	0	0	0	450	
	\$60,589	\$62,324	\$71,166	\$73,586	\$80,170	\$86,686	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,828	
30-34	36	57	57	47	69	543	126	0	0	0	0	0	0	935	
	\$58,464	\$62,967	\$70,791	\$78,546	\$82,532	\$90,222	\$95,797	\$0	\$0	\$0	\$0	\$0	\$0	\$85,750	
35-39	16	18	29	35	54	404	506	116	0	0	0	0	0	1,178	
	\$58,046	\$59,660	\$72,205	\$78,174	\$82,303	\$90,328	\$97,614	\$102,840	\$0	\$0	\$0	\$0	\$0	\$92,607	
40-44	8	9	16	12	28	254	522	536	152	1	0	0	0	1,538	
	\$56,270	\$61,552	\$71,402	\$81,522	\$81,199	\$90,471	\$98,623	\$104,876	\$108,290	*	\$0	\$0	\$0	\$99,238	
45-49	2	5	11	6	14	113	243	380	478	123	0	0	0	1,375	
	\$54,002	\$59,306	\$71,874	\$77,208	\$82,978	\$91,247	\$96,538	\$106,251	\$110,269	\$119,233	\$0	\$0	\$0	\$104,974	
50-54	3	5	3	5	1	34	116	198	387	346	141	3	0	1,242	
	\$110,536	\$75,344	\$95,594	\$106,877	*	\$85,169	\$94,529	\$102,091	\$110,815	\$115,963	\$123,928	\$129,684	\$0	\$109,982	
55-59	0	5	3	1	4	13	42	82	177	185	221	18	0	751	
	\$0	\$91,783	\$136,552	*	\$120,940	\$101,365	\$96,480	\$101,136	\$106,709	\$116,076	\$124,188	\$130,313	\$0	\$113,503	
60-64	1	1	1	1	1	9	21	22	38	36	76	7	0	214	
	*	*	*	*	*	\$83,108	\$108,736	\$94,894	\$109,230	\$113,364	\$119,526	\$110,949	\$0	\$109,910	
65-69	0	0	0	0	0	0	3	1	6	3	7	2	0	22	
	\$0	\$0	\$0	\$0	\$0	\$0	\$104,784	*	\$105,688	\$117,922	\$108,243	\$105,864	\$0	\$109,958	
70 & Over	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	*	
Total	113	185	196	154	241	1,543	1,579	1,335	1,238	694	446	30	0	7,754	
	\$59,736	\$63,084	\$72,325	\$77,896	\$82,357	\$89,910	\$97,542	\$104,315	\$109,634	\$116,416	\$123,046	\$124,102	\$0	\$99,506	

Average:	Age	43.6	Number of Participants:	Vested	6,697	Males	7,299	Early Retirement Eligible:	556
	Service	14.9		Not Vested	1,057	Females	455	Normal Retirement Eligible:	1,406

*Annual Salary omitted for privacy reasons.

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

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

WSPRS Plan 1

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	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
25-29	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
30-34	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
	\$0	\$0	\$0	\$0	\$0	\$0	\$73,638	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73,638
35-39	0	0	0	0	0	0	64	20	0	0	0	0	0	0	84
	\$0	\$0	\$0	\$0	\$0	\$0	\$77,737	\$76,477	\$0	\$0	\$0	\$0	\$0	\$0	\$77,437
40-44	0	0	0	0	0	0	51	109	36	0	0	0	0	0	196
	\$0	\$0	\$0	\$0	\$0	\$0	\$76,325	\$80,609	\$89,517	\$0	\$0	\$0	\$0	\$0	\$81,131
45-49	0	0	0	0	0	1	23	60	117	17	1	0	0	0	219
	\$0	\$0	\$0	\$0	\$0	*	\$75,015	\$79,802	\$86,748	\$93,389	*	\$0	\$0	\$0	\$84,068
50-54	0	0	0	0	0	1	11	16	42	35	5	0	0	0	110
	\$0	\$0	\$0	\$0	\$0	*	\$76,842	\$76,231	\$82,103	\$85,169	\$83,442	\$0	\$0	\$0	\$81,879
55-59	0	0	0	0	0	0	7	3	3	9	10	0	0	0	32
	\$0	\$0	\$0	\$0	\$0	\$0	\$71,427	\$76,330	\$70,959	\$77,582	\$84,710	\$0	\$0	\$0	\$77,725
60-64	0	0	0	0	0	0	1	3	1	1	4	0	0	0	10
	\$0	\$0	\$0	\$0	\$0	\$0	*	\$75,931	*	*	\$80,970	\$0	\$0	\$0	\$77,300
65-69	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	*
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	0	0	0	0	0	2	162	211	199	63	20	0	0	0	657
	\$0	\$0	\$0	\$0	\$0	\$79,613	\$76,459	\$79,529	\$85,942	\$85,860	\$84,223	\$0	\$0	\$0	\$81,465

Average: Age 45.6 Number of Participants: Vested 657 Males 602 Early Retirement Eligible: N/A
 Service 18.9 Not Vested 0 Females 55 Normal Retirement Eligible: 104

*Annual Salary omitted for privacy reasons.

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

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

(Continued)

WSPRS 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	0	10	10	8	1	0	0	0	0	0	0	0	0	0	29
	\$0	\$45,485	\$48,124	\$54,517	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,262
25-29	1	25	17	18	10	41	0	0	0	0	0	0	0	112	
	*	\$48,164	\$53,366	\$56,098	\$58,749	\$66,926	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,023	
30-34	1	11	5	4	9	83	16	0	0	0	0	0	0	129	
	*	\$46,114	\$52,377	\$55,943	\$60,709	\$72,444	\$75,118	\$0	\$0	\$0	\$0	\$0	\$0	\$68,321	
35-39	0	1	3	4	2	43	30	0	0	0	0	0	0	83	
	\$0	*	\$51,874	\$55,308	\$57,137	\$72,213	\$78,146	\$0	\$0	\$0	\$0	\$0	\$0	\$72,081	
40-44	0	1	3	2	0	19	16	0	0	0	0	0	0	41	
	\$0	*	\$54,357	\$56,292	\$0	\$71,503	\$75,245	\$0	\$0	\$0	\$0	\$0	\$0	\$70,339	
45-49	0	0	0	1	0	5	2	0	0	0	0	0	0	8	
	\$0	\$0	\$0	*	\$0	\$68,536	\$71,780	\$0	\$0	\$0	\$0	\$0	\$0	\$68,356	
50-54	0	0	2	0	1	3	0	0	0	0	0	0	0	6	
	\$0	\$0	\$56,183	\$0	*	\$70,428	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$64,339	
55-59	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	
60-64	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	
65-69	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	
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	2	48	40	37	23	195	64	0	0	0	0	0	0	409	
	\$52,721	\$46,958	\$52,035	\$55,786	\$59,431	\$70,990	\$76,465	\$0	\$0	\$0	\$0	\$0	\$0	\$65,058	

Average:	Age	32.5	Number of Participants:	Vested	257	Males	376	Early Retirement Eligible:	N/A
	Service	5.7		Not Vested	152	Females	33	Normal Retirement Eligible:	1

*Annual Salary omitted for privacy reasons.

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

Age and Years Retired Distribution of Service Retired Members
(Number of Service Retired Members and Average Monthly Benefit)

(Continued)

PERS Plan 2

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*
50-54	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3
	\$0	*	\$0	\$112	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$93
55-59	129	165	109	58	24	3	0	0	0	0	0	0	0	0	488
	\$2,784	\$1,977	\$2,195	\$2,211	\$1,559	\$247	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,236
60-64	365	593	465	237	140	190	1	0	0	0	0	0	0	0	1,991
	\$2,607	\$2,393	\$2,362	\$2,329	\$1,879	\$1,072	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,254
65-69	1,164	2,365	2,079	1,799	1,288	847	88	0	0	0	0	0	0	0	9,630
	\$1,640	\$1,479	\$1,572	\$1,532	\$1,481	\$1,609	\$726	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,533
70-74	109	231	292	431	600	5,432	340	20	0	0	0	0	0	0	7,455
	\$1,677	\$1,504	\$1,521	\$1,651	\$1,415	\$1,177	\$1,108	\$590	\$0	\$0	\$0	\$0	\$0	\$0	\$1,249
75-79	20	52	60	66	69	828	3,288	46	1	0	0	0	0	0	4,430
	\$1,110	\$1,596	\$1,422	\$1,264	\$1,422	\$1,252	\$958	\$952	*	\$0	\$0	\$0	\$0	\$0	\$1,039
80-84	5	9	10	14	13	115	453	1,697	9	0	0	0	0	0	2,325
	\$1,552	\$1,090	\$1,503	\$1,071	\$1,087	\$1,056	\$941	\$782	\$354	\$0	\$0	\$0	\$0	\$0	\$834
85-89	1	2	4	1	3	24	79	243	490	0	0	0	0	0	847
	*	\$1,647	\$693	*	\$429	\$800	\$721	\$795	\$631	\$0	\$0	\$0	\$0	\$0	\$693
90-94	0	0	0	0	0	5	10	21	53	94	1	0	0	0	184
	\$0	\$0	\$0	\$0	\$0	\$983	\$794	\$721	\$588	\$450	*	\$0	\$0	\$0	\$552
95 & Over	0	0	0	0	0	0	3	1	4	8	0	0	0	0	16
	\$0	\$0	\$0	\$0	\$0	\$0	\$281	*	\$353	\$569	\$0	\$0	\$0	\$0	\$488
Total	1,793	3,418	3,020	2,608	2,137	7,444	4,262	2,028	557	102	1	0	0	0	27,370
	\$1,915	\$1,664	\$1,706	\$1,628	\$1,484	\$1,228	\$958	\$785	\$619	\$459	*	\$0	\$0	\$0	\$1,348

Average: Age 71.5
 Years Retired 6.4

Males 12,354
Females 15,016

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of Service Retired Members
(Number of Service Retired Members and Average Monthly Benefit)

(Continued)

SERS Plan 2

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	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
50-54	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
55-59	9	17	9	4	4	0	0	0	0	0	0	0	0	0	43
	\$1,094	\$959	\$746	\$1,067	\$777	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$936
60-64	34	82	60	26	16	32	0	0	0	0	0	0	0	0	250
	\$1,311	\$1,244	\$928	\$815	\$1,004	\$516	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,024
65-69	140	476	390	334	232	194	13	0	0	0	0	0	0	0	1,779
	\$890	\$970	\$915	\$819	\$779	\$865	\$546	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$884
70-74	12	56	73	90	121	1,177	85	0	0	0	0	0	0	0	1,614
	\$1,114	\$896	\$933	\$887	\$785	\$764	\$876	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$793
75-79	2	16	23	21	24	245	417	0	0	0	0	0	0	0	748
	\$496	\$813	\$801	\$658	\$719	\$680	\$685	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$690
80-84	1	6	5	6	8	52	67	0	0	0	0	0	0	0	145
	*	\$881	\$944	\$569	\$619	\$592	\$536	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$606
85-89	0	1	0	2	3	11	16	0	0	0	0	0	0	0	33
	\$0	*	\$0	\$457	\$520	\$380	\$445	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$428
90-94	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
	\$0	\$0	\$0	\$0	\$0	\$1,550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,550
95 & Over	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*
Total	198	654	560	483	408	1,714	598	0	4,615						
	\$991	\$992	\$912	\$822	\$781	\$752	\$686	\$0	\$817						

Average: Age 70.6

Years Retired 5.0

Males 1,345

Females 3,270

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of Service Retired Fire Fighters
(Number of Service Retired Members and Average Monthly Benefit)

(Continued)

LEOFF Plan 2

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	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
50-54	19	20	4	2	1	0	0	0	0	0	0	0	0	0	46
	\$4,490	\$4,195	\$3,994	\$3,316	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,228
55-59	46	70	63	41	41	47	0	0	0	0	0	0	0	0	308
	\$4,896	\$4,895	\$4,642	\$3,881	\$3,479	\$2,999	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,231
60-64	38	38	46	38	19	126	12	0	0	0	0	0	0	0	317
	\$4,612	\$4,502	\$4,713	\$4,238	\$3,339	\$3,110	\$2,389	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,811
65-69	5	13	10	8	8	44	33	0	0	0	0	0	0	0	121
	\$3,464	\$3,497	\$4,225	\$3,771	\$3,988	\$2,995	\$2,505	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,153
70-74	0	1	3	5	1	18	13	3	0	0	0	0	0	0	44
	\$0	*	\$2,855	\$2,041	*	\$2,358	\$1,897	\$1,227	\$0	\$0	\$0	\$0	\$0	\$0	\$2,051
75-79	0	0	0	0	0	2	8	7	6	0	0	0	0	0	23
	\$0	\$0	\$0	\$0	\$0	\$2,535	\$1,825	\$1,336	\$930	\$0	\$0	\$0	\$0	\$0	\$1,504
80-84	0	0	0	0	0	0	2	1	2	1	0	0	0	0	6
	\$0	\$0	\$0	\$0	\$0	\$0	\$1,652	*	\$652	*	\$0	\$0	\$0	\$0	\$1,402
85-89	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	*
90-94	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
95 & 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	108	142	126	94	70	237	68	11	9	1	0	0	0	0	866
	\$4,658	\$4,532	\$4,571	\$3,906	\$3,441	\$3,005	\$2,263	\$1,454	\$796	*	\$0	\$0	\$0	\$0	\$3,719

Average: Age 61.4

Years Retired 4.4

Males 824

Females 42

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of All Members With Disabilities
(Number of All Members With Disabilities and Average Monthly Benefit)

(Continued)

TRS Plan 1

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	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
50-54	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
55-59	0	0	0	2	0	3	4	0	0	0	0	0	0	0	9
	\$0	\$0	\$0	\$2,464	\$0	\$2,052	\$1,842	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,050
60-64	0	0	0	0	3	21	40	18	6	2	1	0	0	0	91
	\$0	\$0	\$0	\$0	\$2,021	\$2,249	\$1,919	\$1,496	\$1,062	\$390	*	\$0	\$0	\$0	\$1,807
65-69	0	0	0	0	0	14	43	68	22	8	6	1	0	0	162
	\$0	\$0	\$0	\$0	\$0	\$1,874	\$1,590	\$1,664	\$1,172	\$759	\$524	*	\$0	\$0	\$1,500
70-74	0	0	0	0	0	0	11	43	21	13	6	5	0	0	99
	\$0	\$0	\$0	\$0	\$0	\$0	\$1,334	\$1,699	\$1,267	\$1,241	\$797	\$384	\$0	\$0	\$1,385
75-79	0	0	0	0	0	0	0	9	23	37	14	15	1	0	99
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,115	\$1,468	\$1,276	\$1,005	\$448	*	\$1,133
80-84	0	0	0	0	0	0	0	0	3	32	41	8	0	0	84
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,646	\$1,415	\$1,138	\$898	\$0	\$0	\$1,239
85-89	0	0	0	0	0	0	0	0	0	5	32	10	3	0	50
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,017	\$1,068	\$892	\$687	\$0	\$1,005
90-94	0	0	0	0	0	0	0	0	0	0	6	7	2	0	15
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,041	\$828	\$567	\$0	\$879
95 & Over	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$823	*	\$0	\$824
Total	0	0	0	2	3	38	98	138	75	97	106	48	7	612	
	\$0	\$0	\$0	\$2,464	\$2,021	\$2,095	\$1,706	\$1,617	\$1,299	\$1,243	\$1,032	\$677	\$621	\$1,381	

Average: Age 73.0

Years Retired 22.3

Males 226

Females 386

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of All Members With Disabilities
(Number of All Members With Disabilities and Average Monthly Benefit)

(Continued)

SERS Plan 2

Attained Age	Attained Years Retired													Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
Under 50	0	0	0	0	2	0	1	0	0	0	0	0	0	3
	\$0	\$0	\$0	\$0	\$111	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$112
50-54	2	2	0	1	0	2	1	0	0	0	0	0	0	8
	\$444	\$190	\$0	*	\$0	\$98	*	\$0	\$0	\$0	\$0	\$0	\$0	\$218
55-59	0	6	5	5	4	13	3	0	0	0	0	0	0	36
	\$0	\$343	\$186	\$356	\$157	\$143	\$142	\$0	\$0	\$0	\$0	\$0	\$0	\$213
60-64	3	5	6	10	8	26	6	0	0	0	0	0	0	64
	\$598	\$421	\$345	\$343	\$307	\$231	\$167	\$0	\$0	\$0	\$0	\$0	\$0	\$295
65-69	0	2	8	4	8	45	19	0	0	0	0	0	0	86
	\$0	\$911	\$626	\$621	\$342	\$331	\$224	\$0	\$0	\$0	\$0	\$0	\$0	\$363
70-74	0	0	0	0	0	19	27	0	0	0	0	0	0	46
	\$0	\$0	\$0	\$0	\$0	\$498	\$383	\$0	\$0	\$0	\$0	\$0	\$0	\$431
75-79	0	0	0	0	0	0	5	0	0	0	0	0	0	5
	\$0	\$0	\$0	\$0	\$0	\$0	\$756	\$0	\$0	\$0	\$0	\$0	\$0	\$756
80-84	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	*
85-89	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
90-94	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
95 & 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	5	15	19	20	22	105	63	0	0	0	0	0	0	249
	\$536	\$425	\$421	\$396	\$275	\$309	\$326	\$0	\$0	\$0	\$0	\$0	\$0	\$337

Average: Age 64.7
 Years Retired 6.7

Males 86
 Females 163

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of All Members With Disabilities
(Number of All Members With Disabilities and Average Monthly Benefit)

(Continued)

SERS Plan 3

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	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
50-54	0	3	2	1	0	2	0	0	0	0	0	0	0	0	8
	\$0	\$126	\$206	*	\$0	\$29	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$138
55-59	1	3	0	1	1	4	1	0	0	0	0	0	0	0	11
	*	\$119	\$0	*	*	\$185	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$138
60-64	1	1	3	1	1	13	3	0	0	0	0	0	0	0	23
	*	*	\$207	*	*	\$235	\$120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$236
65-69	0	1	0	3	1	13	9	0	0	0	0	0	0	0	27
	\$0	*	\$0	\$461	*	\$224	\$151	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$224
70-74	0	0	0	0	0	2	6	0	0	0	0	0	0	0	8
	\$0	\$0	\$0	\$0	\$0	\$446	\$253	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$302
75-79	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
	\$0	\$0	\$0	\$0	\$0	\$0	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$540
80-84	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
85-89	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
90-94	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
95 & 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	2	8	5	6	3	34	22	0	80						
	\$128	\$158	\$207	\$415	\$171	\$225	\$224	\$0	\$227						

Average:

Age 63.7
 Years Retired 6.7

Males 30
 Females 50

Defined benefit portion only.

**Monthly benefit omitted for privacy reasons.*

Age and Years Retired Distribution of All Law Enforcement Officers With Disabilities
(Number of All Members With Disabilities and Average Monthly Benefit)

(Continued)

LEOFF Plan 1

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	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
50-54	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
55-59	0	0	0	0	0	3	15	10	12	6	2	0	0	0	48
	\$0	\$0	\$0	\$0	\$0	\$4,285	\$3,880	\$3,285	\$3,203	\$2,813	\$2,107	\$0	\$0	\$0	\$3,405
60-64	0	0	0	0	0	17	65	91	63	53	22	4	0	0	315
	\$0	\$0	\$0	\$0	\$0	\$4,214	\$3,752	\$3,353	\$3,003	\$2,893	\$2,578	\$2,205	\$0	\$0	\$3,266
65-69	0	0	0	0	0	10	73	193	130	105	88	44	7	0	650
	\$0	\$0	\$0	\$0	\$0	\$3,709	\$3,913	\$3,521	\$3,185	\$2,873	\$2,798	\$2,754	\$2,823	\$0	\$3,239
70-74	0	0	0	0	0	1	13	64	108	63	70	46	15	0	380
	\$0	\$0	\$0	\$0	\$0	*	\$3,922	\$3,747	\$3,540	\$3,070	\$2,927	\$2,894	\$2,706	\$0	\$3,282
75-79	0	0	0	0	0	0	1	14	34	32	51	25	11	0	168
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$3,407	\$3,493	\$3,156	\$3,109	\$3,200	\$2,758	\$3,215
80-84	0	0	0	0	0	0	0	2	4	10	32	10	16	0	74
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,984	\$3,194	\$3,076	\$3,240	\$2,900	\$2,887	\$0	\$3,113
85-89	0	0	0	0	0	0	0	0	1	6	8	22	6	0	43
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$3,137	\$3,467	\$3,440	\$2,885	\$0	\$3,313
90-94	0	0	0	0	0	0	0	0	0	1	1	4	4	0	10
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	*	\$2,719	\$3,257	\$0	\$2,917
95 & Over	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	*
Total	0	0	0	0	0	31	167	374	352	276	274	155	60	1,689	
	\$0	\$0	\$0	\$0	\$0	\$3,986	\$3,847	\$3,511	\$3,291	\$2,964	\$2,938	\$2,959	\$2,832	\$3,250	

Average: Age 69.2
 Years Retired 24.1

Males 1,637
 Females 52

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of All Fire Fighters With Disabilities
(Number of All Members With Disabilities and Average Monthly Benefit)

(Continued)

LEOFF Plan 1

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	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
50-54	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
55-59	0	0	1	0	0	7	15	8	7	3	0	0	0	0	41
	\$0	\$0	*	\$0	\$0	\$4,669	\$3,852	\$3,243	\$3,073	\$2,878	\$0	\$0	\$0	\$0	\$3,683
60-64	0	0	0	0	0	35	83	58	38	25	15	6	0	0	260
	\$0	\$0	\$0	\$0	\$0	\$4,657	\$3,832	\$3,721	\$3,418	\$2,874	\$2,643	\$2,625	\$0	\$0	\$3,669
65-69	0	0	0	0	0	27	132	214	134	46	36	25	1	0	615
	\$0	\$0	\$0	\$0	\$0	\$4,567	\$4,048	\$3,811	\$3,511	\$3,160	\$2,893	\$2,630	*	\$0	\$3,678
70-74	0	0	0	0	0	2	48	136	150	65	49	29	7	0	486
	\$0	\$0	\$0	\$0	\$0	\$5,062	\$3,947	\$3,971	\$3,721	\$3,298	\$3,104	\$2,844	\$2,757	\$0	\$3,634
75-79	0	0	0	0	0	0	0	16	61	47	50	19	5	0	198
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,661	\$3,773	\$3,591	\$3,353	\$2,969	\$2,773	\$0	\$3,512
80-84	0	0	0	0	0	0	0	1	12	27	50	38	13	0	141
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$3,773	\$4,004	\$3,591	\$3,386	\$3,155	\$0	\$3,591
85-89	0	0	0	0	0	0	0	0	1	3	19	39	19	0	81
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$3,620	\$3,885	\$3,431	\$3,334	\$0	\$3,520
90-94	0	0	0	0	0	0	0	0	0	0	4	14	22	0	40
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,445	\$3,561	\$3,205	\$0	\$3,354
95 & Over	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,319	\$0	\$3,319
Total	0	0	1	0	0	71	278	433	403	216	223	170	72	1,867	
	\$0	\$0	*	\$0	\$0	\$4,635	\$3,955	\$3,833	\$3,620	\$3,370	\$3,277	\$3,134	\$3,161	\$3,626	

Average: Age 71.1
 Years Retired 22.6

Males 1,862
 Females 5

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of All Law Enforcement Officers With Disabilities

(Number of All Members With Disabilities and Average Monthly Benefit)

(Continued)

LEOFF Plan 2

Attained Age	Attained Years Retired													Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
Under 50	4	10	3	4	3	11	3	0	0	0	0	0	0	38
	\$1,938	\$1,842	\$1,327	\$2,153	\$1,358	\$1,334	\$583	\$0	\$0	\$0	\$0	\$0	\$0	\$1,560
50-54	1	3	1	5	1	7	4	0	0	0	0	0	0	22
	*	\$2,704	*	\$2,891	*	\$1,712	\$902	\$0	\$0	\$0	\$0	\$0	\$0	\$2,283
55-59	2	4	1	2	4	23	6	1	0	0	0	0	0	43
	\$3,875	\$4,601	*	\$3,585	\$2,648	\$3,078	\$863	*	\$0	\$0	\$0	\$0	\$0	\$2,891
60-64	0	2	4	4	2	25	5	0	1	0	0	0	0	43
	\$0	\$4,380	\$2,094	\$3,063	\$4,426	\$2,594	\$1,893	\$0	*	\$0	\$0	\$0	\$0	\$2,621
65-69	0	1	0	0	2	10	9	0	0	0	0	0	0	22
	\$0	*	\$0	\$0	\$2,567	\$2,825	\$1,558	\$0	\$0	\$0	\$0	\$0	\$0	\$2,359
70-74	0	0	0	0	0	2	1	1	0	0	0	0	0	4
	\$0	\$0	\$0	\$0	\$0	\$630	*	*	\$0	\$0	\$0	\$0	\$0	\$737
75-79	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
80-84	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	*
85-89	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
90-94	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
95 & 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	7	20	9	15	12	78	28	2	1	0	1	0	0	173
	\$2,492	\$2,910	\$2,479	\$2,833	\$2,639	\$2,459	\$1,257	\$1,058	*	\$0	*	\$0	\$0	\$2,321

Average: Age 56.6
Years Retired 6.2

Males 141
Females 32

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of Survivors
(Number of Survivors and Average Monthly Benefit)

(Continued)

PERS Plan 2

Attained Age	Attained Years Retired													Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
Under 50	1	8	5	8	2	14	6	5	3	0	0	0	0	52
	*	\$566	\$434	\$473	\$460	\$470	\$193	\$199	\$220	\$0	\$0	\$0	\$0	\$408
50-54	8	18	12	8	5	29	7	5	1	0	0	0	0	93
	\$1,110	\$1,070	\$862	\$1,116	\$417	\$466	\$501	\$466	*	\$0	\$0	\$0	\$0	\$742
55-59	11	27	25	15	22	65	30	4	2	0	0	0	0	201
	\$1,488	\$916	\$869	\$1,050	\$896	\$577	\$506	\$185	\$108	\$0	\$0	\$0	\$0	\$756
60-64	10	26	23	33	28	97	48	17	3	0	0	0	0	285
	\$1,352	\$1,190	\$1,274	\$1,094	\$1,035	\$663	\$469	\$596	\$546	\$0	\$0	\$0	\$0	\$833
65-69	3	9	26	29	35	133	90	38	5	0	0	0	0	368
	\$948	\$940	\$1,338	\$1,125	\$845	\$958	\$641	\$433	\$426	\$0	\$0	\$0	\$0	\$847
70-74	1	5	8	10	13	102	126	66	20	1	0	0	0	352
	*	\$1,588	\$1,000	\$924	\$1,084	\$884	\$657	\$446	\$361	*	\$0	\$0	\$0	\$716
75-79	0	2	4	1	6	56	132	114	28	3	0	0	0	346
	\$0	\$2,273	\$934	*	\$612	\$814	\$779	\$545	\$420	\$312	\$0	\$0	\$0	\$685
80-84	0	0	1	1	1	12	46	111	63	4	0	0	0	239
	\$0	\$0	*	*	*	\$793	\$767	\$631	\$505	\$270	\$0	\$0	\$0	\$624
85-89	0	0	0	1	0	3	14	38	59	20	1	0	0	136
	\$0	\$0	\$0	*	\$0	\$1,039	\$732	\$672	\$552	\$467	*	\$0	\$0	\$606
90-94	0	0	0	0	1	3	1	7	10	10	1	0	0	33
	\$0	\$0	\$0	\$0	*	\$528	*	\$609	\$469	\$353	*	\$0	\$0	\$458
95 & Over	0	0	0	0	0	0	1	0	0	1	0	0	0	2
	\$0	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	*	\$0	\$0	\$0	\$315
Total	34	95	104	106	113	514	501	405	194	39	2	0	0	2,107
	\$1,323	\$1,057	\$1,061	\$1,041	\$883	\$777	\$663	\$548	\$479	\$398	\$140	\$0	\$0	\$725

Average: Age 69.9

Years Retired 10.8

Males 390

Females 1,717

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of Survivors
(Number of Survivors and Average Monthly Benefit)
(Continued)

PERS Plan 3

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	0	2	3	0	2	6	0	0	0	0	0	0	0	0	13
	\$0	\$608	\$186	\$0	\$294	\$244	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$294
50-54	0	4	2	2	0	2	0	0	0	0	0	0	0	0	10
	\$0	\$244	\$328	\$331	\$0	\$184	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$266
55-59	2	3	4	4	4	10	2	0	0	0	0	0	0	0	29
	\$590	\$325	\$279	\$576	\$413	\$240	\$210	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$347
60-64	2	1	2	6	3	11	2	0	0	0	0	0	0	0	27
	\$288	*	\$695	\$403	\$747	\$262	\$245	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400
65-69	1	1	5	0	5	18	6	0	0	0	0	0	0	0	36
	*	*	\$480	\$0	\$385	\$479	\$240	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424
70-74	0	0	1	0	1	5	3	0	0	0	0	0	0	0	10
	\$0	\$0	*	\$0	*	\$450	\$462	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$408
75-79	0	0	0	1	0	0	3	0	0	0	0	0	0	0	4
	\$0	\$0	\$0	*	\$0	\$0	\$320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$431
80-84	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	\$0	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*
85-89	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
90-94	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
95 & 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	5	11	17	13	15	53	16	0	130						
	\$361	\$435	\$373	\$473	\$441	\$351	\$294	\$0	\$377						

Average: Age 60.3
 Years Retired 5.3

Males 29
 Females 101

Defined benefit portion only.

**Monthly benefit omitted for privacy reasons.*

Age and Years Retired Distribution of Survivors
(Number of Survivors and Average Monthly Benefit)

(Continued)

SERS Plan 2

Attained Age	Attained Years Retired													Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
Under 50	0	1	1	0	1	2	2	0	0	0	0	0	0	7
	\$0	*	*	\$0	*	\$358	\$308	\$0	\$0	\$0	\$0	\$0	\$0	\$392
50-54	0	0	3	2	1	3	2	0	0	0	0	0	0	11
	\$0	\$0	\$75	\$372	*	\$289	\$224	\$0	\$0	\$0	\$0	\$0	\$0	\$322
55-59	2	3	3	3	2	9	1	0	0	0	0	0	0	23
	\$564	\$311	\$697	\$213	\$210	\$485	*	\$0	\$0	\$0	\$0	\$0	\$0	\$423
60-64	0	7	6	1	5	10	2	0	0	0	0	0	0	31
	\$0	\$417	\$405	*	\$837	\$332	\$280	\$0	\$0	\$0	\$0	\$0	\$0	\$438
65-69	4	7	5	4	10	17	9	0	0	0	0	0	0	56
	\$787	\$548	\$548	\$796	\$702	\$604	\$267	\$0	\$0	\$0	\$0	\$0	\$0	\$582
70-74	0	0	0	3	2	30	18	0	0	0	0	0	0	53
	\$0	\$0	\$0	\$535	\$564	\$573	\$384	\$0	\$0	\$0	\$0	\$0	\$0	\$507
75-79	0	0	0	1	0	13	19	0	0	0	0	0	0	33
	\$0	\$0	\$0	*	\$0	\$664	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$559
80-84	0	0	0	0	0	1	3	0	0	0	0	0	0	4
	\$0	\$0	\$0	\$0	\$0	*	\$321	\$0	\$0	\$0	\$0	\$0	\$0	\$429
85-89	0	0	0	0	1	1	0	0	0	0	0	0	0	2
	\$0	\$0	\$0	\$0	*	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,211
90-94	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
95 & 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	6	18	18	14	22	86	56	0	0	0	0	0	0	220
	\$713	\$475	\$434	\$476	\$664	\$560	\$385	\$0	\$0	\$0	\$0	\$0	\$0	\$507

Average: Age 66.4
 Years Retired 6.4

Males 96
Females 124

*Monthly benefit omitted for privacy reasons.

Age and Years Retired Distribution of Survivors
(Number of Survivors and Average Monthly Benefit)

(Continued)

SERS Plan 3

Attained Age	Attained Years Retired													Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
Under 50	0	1	0	0	0	2	1	0	0	0	0	0	0	4
	\$0	*	\$0	\$0	\$0	\$138	*	\$0	\$0	\$0	\$0	\$0	\$0	\$151
50-54	1	2	1	0	0	0	1	0	0	0	0	0	0	5
	*	\$293	*	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$224
55-59	2	0	2	2	2	5	1	0	0	0	0	0	0	14
	\$123	\$0	\$252	\$227	\$137	\$312	*	\$0	\$0	\$0	\$0	\$0	\$0	\$230
60-64	0	1	3	4	9	7	0	0	0	0	0	0	0	24
	\$0	*	\$268	\$367	\$289	\$178	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$262
65-69	2	1	4	3	1	20	4	0	0	0	0	0	0	35
	\$315	*	\$319	\$326	*	\$261	\$182	\$0	\$0	\$0	\$0	\$0	\$0	\$277
70-74	0	2	0	0	0	17	6	0	0	0	0	0	0	25
	\$0	\$298	\$0	\$0	\$0	\$248	\$219	\$0	\$0	\$0	\$0	\$0	\$0	\$245
75-79	0	0	0	1	2	6	5	0	0	0	0	0	0	14
	\$0	\$0	\$0	*	\$336	\$212	\$173	\$0	\$0	\$0	\$0	\$0	\$0	\$240
80-84	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*
85-89	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
90-94	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
95 & 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	5	8	10	10	14	57	18	0	0	0	0	0	0	122
	\$211	\$314	\$277	\$345	\$270	\$242	\$188	\$0	\$0	\$0	\$0	\$0	\$0	\$252

Average:

Age
Years Retired65.7
5.7Males
Females62
60

Defined benefit portion only.

**Monthly benefit omitted for privacy reasons.*

Age and Years Retired Distribution of Survivors
(Number of Survivors and Average Monthly Benefit)

(Continued)

PSERS Plan 2

Attained Age	Attained Years Retired													Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over		
Under 50	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
	\$0	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*
50-54	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
55-59	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
60-64	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	\$0	\$0	\$0	*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*
65-69	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
70-74	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
75-79	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
80-84	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
85-89	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
90-94	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
95 & 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	0	0	0	1	1	0	2								
	\$0	\$0	\$0	*	*	\$0	\$75								

Average: Age 52.6

Years Retired 3.2

Males 0

Females 2

*Monthly benefit omitted for privacy reasons.

Historical Data

Historical Data												
(Dollars in millions)	2013		2012		2011		2010		2009		2008	
PERS	Plan 1	Plan 2/3 ¹										
Contribution Information												
Employer Rate	12.29%	12.29%	9.15%	9.15%	9.03%	9.03%	8.41%	8.41%	8.45%	8.45%	5.84%	5.84%
Employee Rate	6.00%	7.00%	6.00%	4.83%	6.00%	4.92%	6.00%	4.91%	6.00%	4.59%	6.00%	4.45%
Funded Status												
Projected Unit Credit Liability	\$12,884	\$23,798	\$12,368	\$20,347	\$12,567	\$18,815	\$12,531	\$17,272	\$13,945	\$15,701	\$13,915	\$14,065
Market Value of Assets	\$7,347	\$23,459	\$7,374	\$20,678	\$8,178	\$20,097	\$7,624	\$16,367	\$7,565	\$14,177	\$10,646	\$17,661
Actuarial Value of Assets	\$8,053	\$24,335	\$8,521	\$22,653	\$8,883	\$20,997	\$9,293	\$19,474	\$9,776	\$18,260	\$9,853	\$16,693
Unfunded Liability	\$4,831	(\$537)	\$3,847	(\$2,306)	\$3,684	(\$2,182)	\$3,238	(\$2,202)	\$4,169	(\$2,560)	\$4,062	(\$2,627)
Funded Ratio	62.5%	102.3%	68.9%	111.3%	70.7%	111.6%	74.2%	112.7%	70.1%	116.3%	70.8%	118.7%
Participant Data												
Number of Actives	5,653	145,053	6,635	143,955	7,733	144,684	9,007	147,519	10,354	148,881	11,663	150,005
Total Annual Salaries	\$318	\$8,339	\$371	\$8,193	\$432	\$8,148	\$507	\$8,206	\$580	\$8,132	\$639	\$7,869
Number of Terminated Vested	1,384	29,663	1,594	28,921	1,789	28,136	1,979	26,881	2,125	25,949	2,271	24,996
Number of Terminated, Not Vested	3,810	97,381	4,042	95,834	4,225	94,340	4,412	92,421	4,563	90,339	4,696	87,437
Number of Retirees and Beneficiaries	51,860	33,468	52,672	29,570	53,264	26,099	53,742	23,157	54,147	20,710	54,581	18,541
Total Annual Benefits	\$1,177	\$491	\$1,169	\$401	\$1,152	\$331	\$1,113	\$268	\$1,074	\$219	\$1,036	\$179
Assumptions												
Valuation Interest Rate	7.90%	7.90%	7.90%	7.90%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Salary Increase	4.03%	4.95%	4.05%	4.99%	4.31%	5.35%	4.32%	5.48%	4.33%	5.57%	4.58%	5.81%
Inflation ²	3.00%	3.00%	3.00%	3.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Growth in Membership	0.95%	0.95%	0.95%	0.95%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%
Actuarial Experience												
Return on Market Value	12.45%	12.34%	1.13%	1.42%	21.37%	21.16%	13.81%	13.13%	(23.16%)	(22.70%)	(1.08%)	(1.27%)
Return on Actuarial Value	5.24%	6.40%	6.25%	6.43%	6.36%	6.43%	4.71%	4.84%	6.63%	5.85%	9.62%	9.82%
Salary Increase	1.89%	2.86%	1.00%	2.00%	0.89%	1.93%	1.72%	2.66%	3.82%	4.72%	6.27%	8.46%
Inflation	2.54%	2.54%	3.17%	3.17%	0.78%	0.78%	0.44%	0.44%	4.48%	4.48%	3.79%	3.79%
Growth in Membership	(1.12%)	(1.12%)	(1.20%)	(1.20%)	(2.63%)	(2.63%)	(3.18%)	(3.18%)	(1.50%)	(1.50%)	2.31%	2.31%
COLA ³	\$2.06	2.54%-3%	\$2.00	3.00%	\$1.94	0.78%-3%	\$1.88	0.44%-3%	\$1.83	3.00%	\$1.73	3.00%

Note: See footnotes at the end of this section.

Historical Data

(Continued)

(Dollars in millions)

	2013		2012		2011		2010		2009		2008	
TRS	Plan 1	Plan 2/3 ¹	Plan 1	Plan 2/3 ¹	Plan 1	Plan 2/3 ¹						
Contribution Information												
Employer Rate	14.47%	14.47%	10.68%	10.68%	10.21%	10.21%	9.18%	9.18%	11.95%	11.95%	6.77%	6.77%
Employee Rate	6.00%	6.79%	6.00%	4.95%	6.00%	4.96%	6.00%	4.80%	6.00%	4.68%	6.00%	3.96%
Funded Status												
Projected Unit Credit Liability	\$9,449	\$8,016	\$9,058	\$6,799	\$9,258	\$6,299	\$9,231	\$5,708	\$10,838	\$5,213	\$10,794	\$4,529
Market Value of Assets	\$6,127	\$8,109	\$6,189	\$7,087	\$6,902	\$6,839	\$6,402	\$5,547	\$6,312	\$4,789	\$8,936	\$6,035
Actuarial Value of Assets	\$6,717	\$8,406	\$7,145	\$7,758	\$7,485	\$7,141	\$7,791	\$6,593	\$8,146	\$6,160	\$8,262	\$5,681
Unfunded Liability	\$2,732	(\$390)	\$1,914	(\$959)	\$1,773	(\$842)	\$1,439	(\$886)	\$2,692	(\$947)	\$2,532	(\$1,152)
Funded Ratio	71.1%	104.9%	78.9%	114.1%	80.8%	113.4%	84.4%	115.5%	75.2%	118.2%	76.5%	125.4%
Participant Data												
Number of Actives	2,393	63,542	3,019	62,338	3,740	62,463	4,591	61,734	5,204	62,184	6,061	60,463
Total Annual Salaries	\$183	\$4,223	\$229	\$4,077	\$284	\$4,085	\$344	\$3,966	\$389	\$3,957	\$432	\$3,621
Number of Terminated Vested	391	9,432	477	9,068	581	8,623	700	8,249	841	7,817	959	7,739
Number of Terminated, Not Vested	453	4,812	505	4,626	530	4,288	558	4,018	590	3,804	615	3,585
Number of Retirees and Beneficiaries	35,912	8,308	36,054	6,864	36,118	5,591	36,015	4,555	36,032	3,895	35,879	3,271
Total Annual Benefits	\$888	\$119	\$877	\$94	\$864	\$74	\$830	\$57	\$805	\$46	\$774	\$37
Assumptions												
Valuation Interest Rate	7.90%	7.90%	7.90%	7.90%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Salary Increase	3.93%	5.27%	3.95%	5.33%	4.21%	5.62%	4.21%	5.76%	4.22%	5.84%	4.49%	6.14%
Inflation ²	3.00%	3.00%	3.00%	3.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Growth in Membership	0.80%	0.80%	0.80%	0.80%	0.90%	0.90%	0.90%	0.90%	0.90%	0.90%	0.90%	0.90%
Actuarial Experience												
Return on Market Value	12.43%	12.35%	1.14%	1.43%	21.35%	21.17%	13.71%	13.11%	(23.15%)	(22.79%)	(1.06%)	(1.20%)
Return on Actuarial Value	5.26%	6.43%	6.28%	6.46%	6.39%	6.47%	4.74%	4.90%	6.66%	5.94%	8.33%	9.28%
Salary Increase	1.35%	2.55%	(0.43%)	0.54%	1.53%	2.44%	0.41%	1.14%	5.43%	6.80%	5.92%	6.49%
Inflation	2.54%	2.54%	3.17%	3.17%	0.78%	0.78%	0.44%	0.44%	4.48%	4.48%	3.79%	3.79%
Growth in Membership	(0.40%)	(0.40%)	(1.28%)	(1.28%)	(0.18%)	(0.18%)	(0.30%)	(0.30%)	1.30%	1.30%	2.44%	2.44%
COLA ³	\$2.06	2.54%-3%	\$2.00	3.00%	\$1.94	0.78%-3%	\$1.88	0.44%-3%	\$1.83	3.00%	\$1.73	3.00%

Note: See footnotes at the end of this section.

Historical Data
(Continued)

(Dollars in millions)

	2013		2012		2011		2010		2009		2008	
SERS	Plan 1	Plan 2/3 ¹										
Contribution Information												
Employer Rate	N/A	12.88%	N/A	9.80%	N/A	9.64%	N/A	8.76%	N/A	8.83%	N/A	5.79%
Employee Rate	N/A	6.70%	N/A	4.59%	N/A	4.64%	N/A	4.37%	N/A	4.08%	N/A	3.51%
Funded Status												
Projected Unit Credit Liability	N/A	\$3,273	N/A	\$2,820	N/A	\$2,607	N/A	\$2,368	N/A	\$2,163	N/A	\$1,906
Market Value of Assets	N/A	\$3,212	N/A	\$2,827	N/A	\$2,746	N/A	\$2,237	N/A	\$1,944	N/A	\$2,443
Actuarial Value of Assets	N/A	\$3,335	N/A	\$3,100	N/A	\$2,872	N/A	\$2,664	N/A	\$2,503	N/A	\$2,303
Unfunded Liability	N/A	(\$62)	N/A	(\$280)	N/A	(\$265)	N/A	(\$296)	N/A	(\$340)	N/A	(\$397)
Funded Ratio	N/A	101.9%	N/A	109.9%	N/A	110.2%	N/A	112.5%	N/A	115.7%	N/A	120.8%
Participant Data												
Number of Actives	N/A	52,295	N/A	51,558	N/A	52,332	N/A	52,339	N/A	52,474	N/A	51,774
Total Annual Salaries	N/A	\$1,514	N/A	\$1,479	N/A	\$1,490	N/A	\$1,475	N/A	\$1,467	N/A	\$1,380
Number of Terminated Vested	N/A	11,588	N/A	10,920	N/A	10,262	N/A	9,700	N/A	9,193	N/A	8,600
Number of Terminated, Not Vested	N/A	8,861	N/A	8,143	N/A	7,317	N/A	6,668	N/A	5,976	N/A	5,383
Number of Retirees and Beneficiaries	N/A	9,079	N/A	7,651	N/A	6,428	N/A	5,384	N/A	4,629	N/A	3,873
Total Annual Benefits	N/A	\$67	N/A	\$54	N/A	\$44	N/A	\$35	N/A	\$29	N/A	\$23
Assumptions												
Valuation Interest Rate	N/A	7.90%	N/A	7.90%	N/A	8.00%	N/A	8.00%	N/A	8.00%	N/A	8.00%
Salary Increase	N/A	5.05%	N/A	5.07%	N/A	5.37%	N/A	5.50%	N/A	5.59%	N/A	5.84%
Inflation ²	N/A	3.00%	N/A	3.00%	N/A	3.50%	N/A	3.50%	N/A	3.50%	N/A	3.50%
Growth in Membership	N/A	0.95%	N/A	0.95%	N/A	1.25%	N/A	1.25%	N/A	1.25%	N/A	1.25%
Actuarial Experience												
Return on Market Value	N/A	12.36%	N/A	1.42%	N/A	21.19%	N/A	13.14%	N/A	(22.85%)	N/A	(1.26%)
Return on Actuarial Value	N/A	6.37%	N/A	6.42%	N/A	6.42%	N/A	4.87%	N/A	5.99%	N/A	9.85%
Salary Increase	N/A	3.72%	N/A	2.26%	N/A	3.02%	N/A	2.47%	N/A	7.27%	N/A	8.34%
Inflation	N/A	2.54%	N/A	3.17%	N/A	0.78%	N/A	0.44%	N/A	4.48%	N/A	3.79%
Growth in Membership	N/A	(0.07%)	N/A	(1.48%)	N/A	(0.01%)	N/A	1.09%	N/A	1.35%	N/A	1.87%
COLA ³	N/A	2.54%-3%	N/A	3.00%	N/A	0.78%-3%	N/A	0.44%-3%	N/A	3.00%	N/A	3.00%

Note: See footnotes at the end of this section.

Historical Data (Continued)												
(Dollars in millions)	2013		2012		2011		2010		2009		2008	
PSERS	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2
Contribution Information												
Employer Rate	N/A	12.07%	N/A	10.28%	N/A	10.22%	N/A	9.71%	N/A	10.11%	N/A	7.73%
Employee Rate	N/A	6.89%	N/A	6.07%	N/A	6.22%	N/A	6.32%	N/A	6.36%	N/A	6.45%
Funded Status												
Projected Unit Credit Liability	N/A	\$180	N/A	\$135	N/A	\$107	N/A	\$80	N/A	\$54	N/A	\$30
Market Value of Assets	N/A	\$226	N/A	\$174	N/A	\$143	N/A	\$93	N/A	\$56	N/A	\$37
Actuarial Value of Assets	N/A	\$224	N/A	\$180	N/A	\$141	N/A	\$103	N/A	\$69	N/A	\$39
Unfunded Liability	N/A	(\$44)	N/A	(\$45)	N/A	(\$34)	N/A	(\$23)	N/A	(\$15)	N/A	(\$8)
Funded Ratio	N/A	124.4%	N/A	133.6%	N/A	131.7%	N/A	128.5%	N/A	128.1%	N/A	127.4%
Participant Data												
Number of Actives	N/A	4,513	N/A	4,250	N/A	4,187	N/A	4,210	N/A	4,340	N/A	3,981
Total Annual Salaries	N/A	\$253	N/A	\$238	N/A	\$233	N/A	\$227	N/A	\$223	N/A	\$200
Number of Terminated Vested	N/A	119	N/A	60	N/A	1	N/A	0	N/A	0	N/A	0
Number of Terminated, Not Vested	N/A	1,383	N/A	1,329	N/A	1,210	N/A	1,075	N/A	762	N/A	397
Number of Retirees and Beneficiaries	N/A	43	N/A	27	N/A	15	N/A	7	N/A	2	N/A	1
Total Annual Benefits	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0
Assumptions												
Valuation Interest Rate	N/A	7.90%	N/A	7.90%	N/A	8.00%	N/A	8.00%	N/A	8.00%	N/A	8.00%
Salary Increase	N/A	5.58%	N/A	5.78%	N/A	6.39%	N/A	6.83%	N/A	7.02%	N/A	6.65%
Inflation ²	N/A	3.00%	N/A	3.00%	N/A	3.50%	N/A	3.50%	N/A	3.50%	N/A	3.50%
Growth in Membership	N/A	0.95%	N/A	0.95%	N/A	1.25%	N/A	1.25%	N/A	1.25%	N/A	1.25%
Actuarial Experience												
Return on Market Value	N/A	12.06%	N/A	1.80%	N/A	20.35%	N/A	10.82%	N/A	(19.25%)	N/A	(3.73%)
Return on Actuarial Value	N/A	7.48%	N/A	7.22%	N/A	7.38%	N/A	4.91%	N/A	3.69%	N/A	6.64%
Salary Increase	N/A	2.96%	N/A	2.16%	N/A	3.28%	N/A	4.63%	N/A	4.86%	N/A	12.52%
Inflation	N/A	2.54%	N/A	3.17%	N/A	0.78%	N/A	0.44%	N/A	4.48%	N/A	3.79%
Growth in Membership	N/A	7.79%	N/A	1.50%	N/A	(0.55%)	N/A	5.75%	N/A	9.02%	N/A	44.50%
COLA ³	N/A	2.54%-3%	N/A	3.00%	N/A	0.78%-3%	N/A	0.44%-3%	N/A	3.00%	N/A	3.00%

Note: See footnotes at the end of this section.

Historical Data
(Continued)

(Dollars in millions)	2013		2012		2011		2010 ⁴		2009		2008	
LEOFF	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2
Contribution Information												
Employer Rate	0.00%	4.78%	0.00%	4.64%	0.00%	4.54%	0.00%	4.54%	0.00%	4.44%	0.00%	4.34%
State Rate	0.00%	3.19%	0.00%	3.10%	0.00%	3.03%	0.00%	3.03%	0.00%	2.96%	0.00%	2.89%
Employee Rate	0.00%	7.97%	0.00%	7.74%	0.00%	7.57%	0.00%	7.57%	0.00%	7.40%	0.00%	7.23%
Funded Status												
Projected Unit Credit Liability	\$4,410	\$6,859	\$4,121	\$6,071	\$4,135	\$5,576	\$4,381	\$5,078	\$4,477	\$4,349	\$4,354	\$3,786
Market Value of Assets	\$5,140	\$7,637	\$4,903	\$6,640	\$5,185	\$6,366	\$4,585	\$5,081	\$4,355	\$4,309	\$6,035	\$5,315
Actuarial Value of Assets	\$5,516	\$7,862	\$5,562	\$7,222	\$5,565	\$6,621	\$5,561	\$6,043	\$5,612	\$5,564	\$5,592	\$5,053
Unfunded Liability	(\$1,107)	(\$1,003)	(\$1,440)	(\$1,150)	(\$1,430)	(\$1,044)	(\$1,180)	(\$965)	(\$1,135)	(\$1,215)	(\$1,238)	(\$1,266)
Funded Ratio	125.1%	114.6%	134.9%	118.9%	134.6%	118.7%	126.9%	119.0%	125.4%	127.9%	128.4%	133.4%
Participant Data												
Number of Actives	143	16,687	186	16,720	250	16,805	301	16,775	356	16,951	421	16,626
Total Annual Salaries	\$15	\$1,597	\$19	\$1,560	\$25	\$1,535	\$29	\$1,490	\$33	\$1,443	\$37	\$1,345
Number of Terminated Vested	1	698	0	689	1	655	1	781	2	672	1	649
Number of Terminated, Not Vested	35	1,565	41	1,558	44	1,617	46	1,707	54	1,663	55	1,531
Number of Retirees and Beneficiaries	7,729	2,782	7,845	2,344	7,932	2,015	8,008	1,639	8,087	1,367	8,134	1,134
Total Annual Benefits	\$356	\$105	\$350	\$82	\$340	\$65	\$339	\$49	\$338	\$38	\$322	\$29
Assumptions												
Valuation Interest Rate	7.90%	7.50%	7.90%	7.50%	8.00%	7.50%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Salary Increase	3.75%	5.30%	3.75%	5.43%	4.00%	5.61%	4.01%	6.55%	4.01%	6.61%	4.26%	6.61%
Inflation ²	3.00%	3.00%	3.00%	3.00%	3.50%	3.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Growth in Membership	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%
Actuarial Experience												
Return on Market Value	12.41%	12.31%	1.23%	1.45%	21.29%	21.08%	13.59%	12.99%	(23.14%)	(22.64%)	(1.11%)	(1.33%)
Return on Actuarial Value	5.66%	6.41%	6.28%	6.25%	6.35%	6.15%	5.24%	4.84%	6.38%	5.72%	11.82%	11.04%
Salary Increase	1.37%	3.91%	1.48%	3.22%	1.31%	3.48%	3.45%	5.35%	5.27%	6.69%	4.66%	7.65%
Inflation	2.54%	2.54%	3.17%	3.17%	0.78%	0.78%	0.44%	0.44%	4.48%	4.48%	3.79%	3.79%
Growth in Membership	(1.32%)	(1.32%)	(0.87%)	(0.87%)	(0.12%)	(0.12%)	0.17%	0.17%	1.53%	1.53%	2.62%	2.62%
COLA ³	2.54%	2.54%-3%	3.17%	3.00%	0.78%	0.78%-3%	0.44%	0.44%-3%	4.48%	3.00%	3.79%	3.00%

Note: See footnotes at the end of this section.

Historical Data
(Continued)

<i>(Dollars in millions)</i>	2013		2012		2011		2010		2009		2008	
WSPRS	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2
Contribution Information												
Employer Rate	8.79%	8.79%	7.76%	7.76%	7.63%	7.63%	7.71%	7.71%	7.93%	7.93%	6.27%	6.27%
Employee Rate	7.19%	7.19%	6.44%	6.44%	6.31%	6.31%	6.39%	6.39%	6.61%	6.61%	4.95%	4.95%
Funded Status												
Projected Unit Credit Liability	\$959	N/A	\$859	N/A	\$829	N/A	\$782	N/A	\$759	N/A	\$719	N/A
Market Value of Assets	\$956	N/A	\$879	N/A	\$895	N/A	\$764	N/A	\$698	N/A	\$932	N/A
Actuarial Value of Assets	\$1,009	N/A	\$982	N/A	\$949	N/A	\$920	N/A	\$900	N/A	\$870	N/A
Unfunded Liability	(\$50)	N/A	(\$123)	N/A	(\$120)	N/A	(\$137)	N/A	(\$142)	N/A	(\$150)	N/A
Funded Ratio	105.3%	N/A	114.3%	N/A	114.5%	N/A	117.5%	N/A	118.7%	N/A	120.9%	N/A
Participant Data												
Number of Actives	657	409	712	354	767	315	806	281	830	264	851	234
Total Annual Salaries	\$54	\$27	\$57	\$23	\$61	\$20	\$65	\$18	\$67	\$17	\$65	\$13
Number of Terminated Vested	70	10	71	8	66	6	66	6	69	4	61	2
Number of Terminated, Not Vested	18	14	18	13	19	11	20	8	22	10	22	7
Number of Disabled Members ⁵	49	0	49	0	51	0	53	0	53	0	55	0
Number of Retirees and Beneficiaries	964	0	915	0	875	0	851	0	834	0	831	0
Total Annual Benefits	\$45	\$0	\$41	\$0	\$39	\$0	\$37	\$0	\$35	\$0	\$33	\$0
Assumptions												
Valuation Interest Rate	7.90%	N/A	7.90%	N/A	8.00%	N/A	8.00%	N/A	8.00%	N/A	8.00%	N/A
Salary Increase	5.09%	N/A	5.01%	N/A	5.22%	N/A	5.26%	N/A	5.35%	N/A	5.47%	N/A
Inflation ²	3.00%	N/A	3.00%	N/A	3.50%	N/A	3.50%	N/A	3.50%	N/A	3.50%	N/A
Growth in Membership	0.95%	N/A	0.95%	N/A	1.25%	N/A	1.25%	N/A	1.25%	N/A	1.25%	N/A
Actuarial Experience												
Return on Market Value	12.37%	N/A	1.31%	N/A	21.23%	N/A	13.39%	N/A	(22.98%)	N/A	(1.17%)	N/A
Return on Actuarial Value	5.99%	N/A	6.34%	N/A	6.38%	N/A	5.07%	N/A	6.18%	N/A	11.60%	N/A
Salary Increase	3.10%	N/A	2.33%	N/A	1.20%	N/A	1.23%	N/A	5.86%	N/A	7.86%	N/A
Inflation	2.54%	N/A	3.17%	N/A	0.78%	N/A	0.44%	N/A	4.48%	N/A	3.79%	N/A
Growth in Membership	(1.72%)	N/A	(1.60%)	N/A	(1.21%)	N/A	0.18%	N/A	0.83%	N/A	4.63%	N/A
COLA ³	2.54%-3%	N/A	3.00%	N/A	0.78%-3%	N/A	0.44%-3%	N/A	3.00%	N/A	3.00%	N/A

Note: See footnotes at the end of this section.

Footnotes for Historical Data Section

¹Plan 3 members do not contribute to the defined benefit plan.

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

³Eligible PERS 1 and TRS 1 members receive a Basic Minimum COLA that is a flat dollar amount per month, per year of service. The Uniform COLA was repealed under Chapter 362, Laws of 2011. The COLA for all other plans is a percentage increase in their monthly pension. For LEOFF 1, the COLA is exactly the CPI. All others are based on the CPI with a 3% maximum per year.

⁴LEOFF 2 values for 2010 were updated after the 2010 Actuarial Valuation Report was published.

⁵WSPRS Disability Benefits for members are provided outside of pension funds.

Glossary

(See the [Glossary](#) on our website also.)

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

A pension plan incurs actuarial gains or losses when the actual experience of the pension plan does not exactly match assumptions. For example, an actuarial gain would occur if assets earned 10 percent for a given year since the assumed interest rate in the valuation is 7.9 percent.

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). Actuaries often select an asset valuation method that smooths the effects of short-term volatility in the market value of assets.

Entry Age Normal (EAN) Funding Method

The EAN funding method is a standard actuarial funding method. The annual cost of benefits under EAN is comprised of two components:

- ◆ Normal cost; plus
- ◆ Amortization of the unfunded actuarial accrued liability.

The normal cost is most commonly 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.

Funded Ratio/Status

The ratio of a plan's current assets to the present value of earned pensions. There are several acceptable methods of measuring a plan's assets and liabilities. The methods and assumptions used can vary based on the purpose of the measurement.

Market Value of Assets (MVA)

The market value of assets is the value of the pension fund based on the value of the assets as they would trade on an open market, including accrued income and expenses.

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

Present Value of Fully Projected Benefits

Computed by projecting the total future benefit payments from the plan, using actuarial assumptions (i.e., probability of death or retirement, salary increases, etc.), and discounting the payments to the valuation date using the valuation interest rate to determine the present value (today's value).

Projected Unit Credit (PUC) Actuarial Cost Method

The PUC cost 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 current plan members will earn in the year following the valuation date. It represents today's value of one year of earned benefits.

Present Value of Future Salaries (PVFS)

The value of future expected salaries discounted with interest to the valuation date.

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 not covered by current plan assets.



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