

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 (GASB) rules.

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 2015 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

Contribution Rates				
	Plan 1		Plan 2/3	
	2015	2014	2015	2014
PERS				
Member*	6.00%	6.00%	7.92%	7.26%
Total Employer	13.25%	12.48%	13.25%	12.48%
TRS				
Member*	6.00%	6.00%	7.48%	6.92%
Total Employer	15.85%	14.78%	15.85%	14.78%
SERS				
Member*	N/A	N/A	7.80%	6.96%
Total Employer	N/A	N/A	14.02%	13.07%
PSERS				
Member	N/A	N/A	6.98%	6.81%
Total Employer	N/A	N/A	12.20%	11.92%
LEOFF				
Member	0.00%	0.00%	7.88%	7.91%
Employer	0.00%	0.00%	4.73%	4.74%
State	0.00%	0.00%	3.15%	3.17%
WSPRS				
Member	7.34%	7.34%	7.34%	7.34%
Employer (State)	14.90%	10.82%	14.90%	10.82%

Employer rates exclude administrative expense rate.
**Plan 3 members do not contribute to the defined benefit plan.*

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 became effective at the beginning of the 2015-17 Biennium.

Contribution Rate-Setting Cycle

Under current Washington State law, in July of even-numbered years, the Pension Funding Council (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.

If all actuarial assumptions are realized and all future contributions required under this funding policy are made, we expect the funding policy to accumulate sufficient assets to provide for all future benefits for current members when due.

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 2015 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, one assumption change explains most of the change from last year's report. For all systems, except LEOFF 2, we lowered the long-term assumed rate of investment return from 7.8 to 7.7 percent consistent with state law. This assumption change led to lower funded status and higher calculated contribution rates than calculated last valuation.

We observed no significant changes in the covered population. We also made no significant changes to our actuarial methods. Plan provisions changed for some survivors of LEOFF and WSPRS members; otherwise, plan provisions were unchanged.

In terms of annual plan experience, the actual rate of investment return on the Market Value of Assets



Big Heart Lake, Alpine Lakes Wilderness—near Skykomish

was 4.93 percent and above the assumed rate. With the exception of PSERS, the rate of investment return on the actuarial (or smoothed) value of assets was lower than expected for the plan year. SERS 2/3 and LEOFF 2 salaries grew more than expected; all others increased less than expected.

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 valuation results.

Actuarial Liabilities

The next table 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.

Actuarial Liabilities		
(Dollars in Millions)	2015	2014
All Systems		
Future Value of Fully Projected Benefits	\$616,416	\$587,020
Present Value of Fully Projected Benefits	99,441	93,654
Present Value of Accrued (Earned) Benefits*	83,477	78,800
Unfunded Actuarial Accrued Liability**	\$7,214	\$6,500
Valuation Interest Rate***	7.70%	7.80%

*Calculated using Entry Age Normal (EAN) cost method.
 **For PERS 1, TRS 1, and LEOFF 1.
 ***7.50% in LEOFF 2.

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 Entry Age Normal

(EAN) 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 our website for **Projected Benefit Payments** by year for each system and plan. Also, see the **Glossary** on our website for brief explanations of the actuarial terms.

Assets

The following table 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.

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.

Assets		
(Dollars in Millions)	2015	2014
All Systems		
Market Value of Assets	\$74,490	\$72,553
Actuarial Value of Assets	71,460	68,777
Contributions*	2,301	2,193
Disbursements	3,695	3,504
Investment Return	3,276	11,597
Other**	\$56	\$54
Rate of Return on Assets***	4.93%	18.89%

*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. WSIB revised the asset return during the 2014 valuation.

Funded Status

Funded Status		
(Dollars in Millions)	2015	2014
All Systems		
a. Accrued Liability*	\$83,477	\$78,800
b. Market Value of Assets**	74,476	72,553
c. Deferred Gains/(Losses)	3,016	3,776
d. Actuarial Value of Assets (b-c)	71,460	68,777
Unfunded Liability (a-d)	\$12,017	\$10,023
Funded Ratio (d/a)	86%	87%

Note: Totals may not agree due to rounding.
 *Liabilities valued using Entry Age Normal cost method.
 **2015 Market Value of Assets reduced by a \$15.799 million payable to the LEOFF 2 Benefit Improvement Account due by 6/30/2016, discounted to 6/30/2015 at 7.5% (C 4 L 15).

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.

In this report, we present funded status based on the EAN cost method only. Prior reports included funded status results based on the Projected Unit Credit (PUC) cost method.

The table above 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.

Participant Data

The next table summarizes participant data used in the actuarial valuation for the plan year ending June 30, 2015, 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	2015	2014
Active Members		
Number	301,260	296,293
Total Salaries (in Millions)	\$17,823	\$17,211
Average Annual Salary	\$59,160	\$58,087
Average Attained Age	47.3	47.6
Average Service	12.0	12.2
Retirees and Beneficiaries		
Number	163,788	156,992
Average Annual Benefit	\$22,187	\$21,941
Terminated Members		
Number Vested	57,981	55,426
Number "Non-Vested"	125,114	120,732

Key Assumptions

This table displays key economic assumptions used in the actuarial valuation. With this valuation, we lowered the assumed valuation interest rate from 7.8 percent to 7.7 percent.

Key Assumptions	
All Systems	
Valuation Interest Rate*	7.70%
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.