







# Office of the State Actuary

*"Securing tomorrow's pensions today."*

October 3, 2014

Ms. Marcie Frost  
Director  
Department of Retirement Systems  
PO Box 48380  
Olympia, Washington 98504-8380

**SUBJECT: ACTUARIAL CERTIFICATION LETTER**

Dear Marcie:

At your request, we prepared the following information for inclusion in the *2014 Comprehensive Annual Financial Report (CAFR)*:

1. Introductory Section.
  - ❖ Financial Information – Funding Paragraph.
2. Financial Section.
  - ❖ Number of Participating Members.
  - ❖ Note 2C: Funding Policy.
  - ❖ Components for the Schedule of Changes in Net Pension Liability (NPL):
    - Service Cost; Interest; Changes of Benefit Terms; Differences between Expected and Actual Experience; Changes in Assumptions.
  - ❖ NPL component for the Schedule of NPL.
  - ❖ Actuarially Determined Contributions (ADC) component for the Schedule of Contributions.
  - ❖ Note 2B: Actuarial components of Governmental Accounting and Standards Board (GASB) 67 requirements.
  - ❖ GASB 67 Notes for Required Supplementary Information:
    - Methods and Assumptions.
3. Actuarial Section.
  - ❖ Funded Status and Funding Progress (one year).
  - ❖ Schedules of Funding Progress.



- ❖ Additional Information for the Defined Benefit Plans.
- ❖ Schedule of Contributions from Employers and Others.
- ❖ Schedules of Active Member Valuation Data.
- ❖ Schedules of Retirees and Beneficiaries Added to and Removed from Rolls.
- ❖ Summary of Actuarial Assumptions and Methods.
- ❖ Solvency Tests.
- ❖ Analyses of Selected Experience.

4. Statistical Section.

- ❖ Distribution of Membership.
- ❖ Schedule of Benefit Recipients by Type of Benefit.
- ❖ Schedule of Average Benefit Payments to Service Retirees in Year of Retirement.

The primary purpose of this information is to satisfy the actuarial reporting requirements of GASB and the Government Finance Officers Association (GFOA). Readers should not use this information for other purposes. Please replace this information with more recent information from next year's CAFR when available.

We also prepare annual actuarial valuations for determining contribution requirements and funding progress (a "funding" valuation) consistent with the state's funding policy. The funding valuations serve a different purpose from accounting valuations or measurements, and the results of the funding valuations may not match these accounting disclosures.

We performed the most recent actuarial valuation in 2014 with a valuation date of June 30, 2013. The Total Pension Liability (TPL) was calculated as of the valuation date and projected to the measurement date of June 30, 2014. Plan liabilities were rolled forward from June 30, 2013, to June 30, 2014, reflecting each plan's normal cost (using the Entry Age cost method), assumed interest, and actual benefit payments.

GASB 67 requires an "asset sufficiency test" to determine whether (or how long) we can use the long-term expected rate of return on assets to measure the present value of plan liabilities for accounting purposes. For this test, we made the following assumptions to determine projected employee and employer contributions:

- ❖ A 7.7 percent long-term discount rate to determine funding liabilities consistent with current law for calculating future contribution rate requirements (for all plans except the Law Enforcement Officers' and Fire Fighters' Plan 2, Judicial Retirement System (JRS), and Judges).



- ❖ We reflected actual asset returns through June 30, 2014, and assumed a 7.5 percent rate of investment return on invested assets thereafter consistent with the long-term expected rate of return (for all plans except JRS and Judges).
- ❖ With the exception of determining future Plan 1 Unfunded Actuarial Accrued Liability (UAAL) contributions from employers of the Public Employees' Retirement System (PERS), the Teachers' Retirement System (TRS), School Employees' Retirement System (SERS), and Public Safety Employees' Retirement System (PSERS), we assumed no new entrants for purposes of the asset sufficiency test.
- ❖ Consistent with current law, employers of PERS, TRS, SERS, and PSERS would continue to pay the minimum Plan 1 UAAL contribution rate until the applicable Plan 1 is fully funded.
- ❖ The Legislature would continue the current contribution rate phase-in for the new mortality assumptions until completed at the end of six years.

For the asset sufficiency test, we also reviewed the resulting contribution projections for reasonability and found them to be reasonable for purposes of performing this test.

Otherwise, we used the same data, assumptions, and methods for the asset sufficiency test as we disclosed in our [2013 Actuarial Valuation Report](#).

As of this measurement, all plans—with the exception of JRS and Judges (“pay-as-you-go” plans)—are expected to retain sufficient assets to pay all future benefits for current members using current assumptions, current plan provisions, and assuming the continuation of current state funding policy in Chapter 41.45 RCW (the actuarial funding chapter).

We relied on participant data provided by your department to perform the latest actuarial valuation. The Washington State Investment Board, your department, and the Office of the State Treasurer provided financial and asset information. We reviewed the data and the assets for reasonableness as appropriate based on the purpose of the valuation. I relied on all the information provided as complete and accurate. In my opinion, this information is adequate and substantially complete for purposes of this valuation. Please see the **Actuarial Certification Letter** in the [2013 Actuarial Valuation Report](#) for additional information on the certification of the latest actuarial valuation results.

We prepared the required accounting disclosures in accordance with GASB Statement 67. At your request, we also prepared accounting disclosures under the prior GASB Statements 25, 27, and 50. We prepared all items in accordance with generally accepted actuarial principles and actuarial standards of practice as of the date of this letter.



Ms. Marcie Frost  
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I certify, to the best of my knowledge, that the actuarial submissions in the 2014 CAFR meet the GFOA standards for actuarial reporting.

The undersigned, with actuarial credentials, meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. I am available to provide extra advice and explanations as needed.

Sincerely,

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

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## Summary of Plan Provisions – Page 1 of 2

A narrative summary of retirement plans managed by DRS is provided in Section B of Note 2 in the Financial Section of this CAFR. A tabular summary of key plan provisions as of June 30, 2014 is provided below.

<b>Tabular Summary of Key Plan Provisions – As of June 30, 2014</b>				
<b>Plan</b>	<b>Membership Eligibility</b>	<b>Vesting</b>	<b>Retirement Eligibility</b>	<b>Benefit</b>
PERS Plan 1	State employees, elected officials, employees of local governments, legislative committees, community/technical colleges, classified employees of school districts, district/municipal court judges, and some employees of the Supreme, Appeals and Superior Courts (By 9/30/77)	After five years of eligible service	After 30 years of service, or at age 60 with five years of service, or at age 55 with 25 years of service	2% of Average Final Compensation (AFC) per year of service, capped at 60% of AFC  JBM Participants: 3.5% of AFC per year of service, capped at 75% of AFC
PERS Plan 2	Same as PERS Plan 1, except classified school district employees (On or after 10/1/77 and new employees on or after 3/1/02 at state agencies and higher education, or on or after 9/1/02 at all other employers; who chose Plan 2)	After five years of eligible service	At age 65 with five years of service, or an actuarially reduced benefit at age 55 with 20 years of service	2% of AFC per year of service  JBM Participants: 3.5% of AFC per year of service, capped at 75% of AFC
PERS Plan 3	Same as PERS Plan 2 (On or after 10/1/77 and new employees on or after 3/1/02 at state agencies and higher education, or on or after 9/1/02 at all other employers; who chose Plan 3)	Varies	At age 65 if vested, or an actuarially reduced benefit at age 55 with 10 years of service (defined benefit portion)	1% of AFC per year of service (defined benefit portion)  JBM Participants: 1.6% of AFC per year of service, capped at 37.5% of AFC  The defined contribution portion depends on the member's contribution level and on investment performance
SERS Plan 2	All classified employees of school districts or educational service districts (By 8/31/00 and employees on or after 7/1/07 with no past PERS Plan 2 service who chose Plan 2)	After five years of eligible service	After age 65 with five years of service, or an actuarially reduced benefit at age 55 with 20 years of service	2% of AFC per year of service
SERS Plan 3	All classified employees of school districts or educational service districts (On or after 9/1/00 and employees on or after 7/1/07 with no past PERS Plan 2 service who chose Plan 3)	Varies	At age 65 if vested, or an actuarially reduced benefit at age 55 with 10 years of service (defined benefit portion)	1% of AFC per year of service (defined benefit portion)  The defined contribution portion depends on the member's contribution level and on investment performance
PSERS Plan 2	All full-time public safety officers at select state agencies, counties and cities except Seattle, Spokane and Tacoma (On or after 7/1/06)	After five years of eligible service	At age 65 with five years of service, or at age 60 with 10 years of PSERS service, or at age 53 with 20 years of service reduced three percent for each year under age 60	2% of AFC per year of service
TRS Plan 1	All certificated public school employees who work in an instructional, administrative or supervisory capacity (By 9/30/77)	After five years of eligible service	Any age with 30 years of service, or at age 60 with five years of service, or at age 55 with 25 years of service	2% of AFC per year of service, capped at 60% of AFC  JBM Participants: 3.5% of AFC per year of service, capped at 75% of AFC

## Summary of Plan Provisions – Page 2 of 2

Plan	Membership Eligibility	Vesting	Retirement Eligibility	Benefit
TRS Plan 2	Same as TRS Plan 1 (On or after 10/1/77 and by 6/30/96, and employees on or after 7/1/07 who chose Plan 2)	After five years of eligible service	At age 65 with five years of service, or an actuarially reduced benefit at age 55 with 20 years of service	2% of AFC per year of service
TRS Plan 3	Same as TRS Plan 1 (On or after 7/1/96, and employees on or after 7/1/07 who chose Plan 3)	Varies	At age 65 if vested, or an actuarially reduced benefit at age 55 with 10 years of service (defined benefit portion)	1% of AFC per year of service (defined benefit portion) The defined contribution portion depends on the member's contribution level and on investment performance
LEOFF Plan 1	All full-time, fully compensated law enforcement officers and fire fighters (By 9/30/77)	After five years of eligible service	At age 50 with five years of service	20+ years of service: 2% of final average salary (FAS) per year of service 10-19 years of service: 1.5% of FAS per year of service 5-9 years of service: 1% of FAS per year of service
LEOFF Plan 2	All full-time, fully compensated law enforcement officers, fire fighters and emergency medical technicians (On or after 10/1/77)	After five years of eligible service	At age 53 with five years of service, or a benefit at age 50 with 20 years of service reduced 3% for each year under age 53	2% of FAS per year of service
WSPRS Plan 1	Commissioned employees of the Washington State Patrol (On or after 8/1/47 and by 12/31/02)	No requirement for active members; after five years of eligible service for inactive members	At age 55 or after 25 years of service	2% of average final salary (AFS) per year of service, capped at 75% of AFS
WSPRS Plan 2	Same as WSPRS Plan 1 (On or after 1/1/03)	No requirement for active members; after five years of eligible service for inactive members	At age 55 or after 25 years of service	2% of AFS per year of service, capped at 75% of AFS
JRS	Judges elected or appointed to the Supreme Court, the Court of Appeals and Superior Courts (On or after 8/9/71 and by 6/30/88 – New judges on or after 7/1/88 join PERS)	After 15 years of service	At age 60	15 years of service: 3.5% of FAS per year of service, capped at 75% of FAS 10-14 years of service: 3% of FAS per year of service, capped at 75% of FAS
Judges	Judges elected or appointed to the Supreme Court, the Court of Appeals and Superior Courts (By 8/8/71)	After 12 years of service	At age 70 with 10 years of service or any age with 18 years of service	1/2 of the monthly salary

DRS publishes handbooks describing the rights and benefits for each system and plan, including disability and survivor benefits. These handbooks are provided to members by their employers. They are also available from DRS and are on the DRS website at [drs.wa.gov](http://drs.wa.gov).

# Summary of Actuarial Assumptions and Methods

## 1. Actuarial Assumptions and Methods Selection

### Economic Assumptions and Methods

Developed in accordance with Washington State law and the Pension Funding Council.

### Demographic Assumptions and Methods

Derived by the Washington State Office of the State Actuary and based on the 2007-2012 Experience Studies (adopted July, 2014). Additional assumptions for subsequent events and law changes are current as of the 2013 actuarial valuation report.

## 2. Investment Return

7.8 percent per annum for all systems except LEOFF 2 (7.5 percent), and JRS/Judges (4.0 percent).

## 3. Mortality Tables – Page 1 of 2

Mortality rates are based on the *RP-2000 Combined Healthy Table* and *Combined Disabled Table* (except LEOFF 1) published by the Society of Actuaries. JRS utilizes the PERS mortality rates.

The Healthy and Disabled Mortality Rates displayed by system have been projected to the valuation date for illustrative purposes only. We use the RP-2000 Mortality Rates combined with 100 percent of Scale BB on a generational basis in the valuation. Probabilities of mortality are illustrated in the following tables.

Age	RP-2000 Mortality Rates				100% Scale BB	
	Combined Healthy		Disabled		Male	Female
	Male	Female	Male	Female		
20	0.0345%	0.0191%	2.2571%	0.7450%	0.3000%	0.3000%
25	0.0376%	0.0207%	2.2571%	0.7450%	0.3000%	0.3000%
30	0.0444%	0.0264%	2.2571%	0.7450%	0.3000%	0.3000%
35	0.0773%	0.0475%	2.2571%	0.7450%	0.3000%	0.3000%
40	0.1079%	0.0706%	2.2571%	0.7450%	0.3000%	0.3000%
45	0.1508%	0.1124%	2.2571%	0.7450%	0.3000%	0.3000%
50	0.2138%	0.1676%	2.8975%	1.1535%	0.3000%	0.3000%
55	0.3624%	0.2717%	3.5442%	1.6544%	0.3000%	0.5000%
60	0.6747%	0.5055%	4.2042%	2.1839%	0.7000%	1.0000%
65	1.2737%	0.9706%	5.0174%	2.8026%	1.2000%	1.2000%
70	2.2206%	1.6742%	6.2583%	3.7635%	1.5000%	1.2000%
75	3.7834%	2.8106%	8.2067%	5.2230%	1.5000%	1.2000%
80	6.4368%	4.5879%	10.9372%	7.2312%	1.5000%	1.2000%
85	11.0757%	7.7446%	14.1603%	10.0203%	1.5000%	1.2000%
90	18.3408%	13.1682%	18.3408%	14.0049%	1.1000%	1.1000%
95	26.7491%	19.4509%	26.7491%	19.4509%	0.6000%	0.6000%
100	34.4556%	23.7467%	34.4556%	23.7467%	0.3000%	0.3000%
105	39.7886%	29.3116%	39.7886%	29.3116%	0.0000%	0.0000%
110	40.0000%	36.4617%	40.0000%	36.4617%	0.0000%	0.0000%
115	40.0000%	40.0000%	40.0000%	40.0000%	0.0000%	0.0000%
120	100.0000%	100.0000%	100.0000%	100.0000%	0.0000%	0.0000%

### 3. Mortality Tables – Page 2 of 2

Healthy Mortality Projected to 2013						
Offsets	PERS, SERS, PSERS		TRS		LEOFF, WSPRS	
	-1	-1	-3	-2	-1	1
Age	Male	Female	Male	Female	Male	Female
20	0.0318%	0.0183%	0.0289%	0.0181%	0.0318%	0.0185%
25	0.0362%	0.0193%	0.0352%	0.0189%	0.0362%	0.0206%
30	0.0396%	0.0239%	0.0367%	0.0226%	0.0396%	0.0295%
35	0.0675%	0.0418%	0.0540%	0.0379%	0.0675%	0.0494%
40	0.0982%	0.0623%	0.0869%	0.0575%	0.0982%	0.0744%
45	0.1343%	0.0990%	0.1168%	0.0901%	0.1343%	0.1176%
50	0.1919%	0.1491%	0.1668%	0.1379%	0.1919%	0.1781%
55	0.3074%	0.2271%	0.2565%	0.2068%	0.3074%	0.2895%
60	0.5426%	0.3897%	0.4283%	0.3443%	0.5426%	0.5102%
65	0.9642%	0.7367%	0.7485%	0.6537%	0.9642%	0.9363%
70	1.6270%	1.2702%	1.3208%	1.1492%	1.6270%	1.5880%
75	2.7853%	2.1760%	2.2415%	1.9634%	2.7853%	2.6468%
80	4.7594%	3.5477%	3.8539%	3.2134%	4.7594%	4.3404%
85	8.1980%	5.9420%	6.6129%	5.3427%	8.1980%	7.3830%
90	14.4131%	10.3195%	11.7822%	9.2932%	14.4131%	12.5237%
95	23.1828%	16.9043%	20.0305%	15.7607%	23.1828%	18.9924%
100	31.7558%	22.2524%	28.8366%	21.5369%	31.7558%	23.5455%
105	39.2003%	27.9055%	37.1685%	26.6044%	39.2003%	30.7811%
110	40.0000%	35.1544%	40.0000%	33.7441%	40.0000%	37.6246%
115	40.0000%	39.8308%	40.0000%	39.3507%	40.0000%	40.0000%
120	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%

Disabled Mortality Projected to 2013				
Offsets	All Plans Except LEOFF Plan 1		LEOFF Plan 1*	
	0	0	2	2
Age	Male	Female	Male	Female
20	2.1706%	0.7165%	0.0352%	0.0187%
25	2.1706%	0.7165%	0.0367%	0.0214%
30	2.1706%	0.7165%	0.0540%	0.0337%
35	2.1706%	0.7165%	0.0869%	0.0533%
40	2.1706%	0.7165%	0.1168%	0.0819%
45	2.1706%	0.7165%	0.1668%	0.1275%
50	2.7865%	1.1093%	0.2565%	0.1941%
55	3.4084%	1.5500%	0.4513%	0.3259%
60	3.8373%	1.9164%	0.7993%	0.5842%
65	4.2886%	2.3955%	1.3740%	1.0396%
70	5.1419%	3.2169%	2.2415%	1.7663%
75	6.7428%	4.4644%	3.8539%	2.9151%
80	8.9862%	6.1809%	6.6129%	4.8117%
85	11.6344%	8.5649%	11.1776%	8.2344%
90	15.8844%	12.1292%	18.7595%	13.6508%
95	24.7362%	17.9872%	27.7287%	19.9043%
100	33.1358%	22.8371%	35.7447%	24.4749%
105	39.7886%	29.3116%	40.0000%	32.2725%
110	40.0000%	36.4617%	40.0000%	38.6015%
115	40.0000%	40.0000%	40.0000%	40.0000%
120	100.0000%	100.0000%	100.0000%	100.0000%

\*LEOFF 1 uses RP-2000 Healthy mortality table.

# Summary of Actuarial Assumptions and Methods (continued)

## 4. Retirement – Page 1 of 3

Probability of Service Retirement – Members Hired Before May 1, 2013												
Age	PERS Plan 1		PERS Plan 2/3				SERS Plan 2/3				PSERS Plan 2	
	Male	Female	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		
45	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
46	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
47	46%	54%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
48	55%	46%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
49	50%	38%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
50	45%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
51	40%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
52	40%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
53	40%	30%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%
54	40%	40%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%
55	17%	28%	2%	2%	12%	12%	1%	2%	12%	12%	2%	2%
56	17%	16%	3%	2%	12%	12%	2%	2%	12%	12%	5%	4%
57	17%	16%	4%	2%	12%	12%	3%	2%	12%	12%	8%	6%
58	17%	16%	5%	2%	12%	12%	4%	3%	12%	12%	11%	8%
59	20%	30%	6%	4%	16%	24%	5%	4%	16%	25%	14%	10%
60	16%	16%	7%	6%	12%	12%	6%	5%	12%	12%	30%	34%
61	23%	21%	8%	13%	20%	20%	15%	13%	21%	20%	26%	26%
62	30%	26%	24%	20%	28%	28%	24%	21%	30%	28%	30%	34%
63	22%	20%	22%	18%	26%	26%	22%	20%	28%	26%	50%	52%
64	28%	28%	56%	56%	56%	56%	56%	52%	57%	48%	70%	70%
65	34%	36%	40%	40%	40%	40%	39%	36%	39%	36%	50%	35%
66	30%	22%	24%	24%	24%	24%	22%	24%	22%	24%	30%	35%
67	26%	22%	24%	24%	24%	24%	22%	23%	22%	23%	30%	35%
68	22%	22%	24%	24%	24%	24%	22%	22%	22%	22%	30%	35%
69	22%	22%	24%	24%	24%	24%	22%	21%	22%	21%	30%	35%
70	22%	22%	24%	24%	24%	24%	22%	20%	22%	20%	100%	100%
71	22%	22%	24%	24%	24%	24%	20%	19%	20%	19%	100%	100%
72	22%	22%	24%	24%	24%	24%	18%	18%	18%	18%	100%	100%
73	22%	22%	24%	24%	24%	24%	16%	17%	16%	17%	100%	100%
74	22%	22%	24%	24%	24%	24%	16%	17%	16%	17%	100%	100%
75	22%	22%	24%	24%	24%	24%	16%	17%	16%	17%	100%	100%
76	22%	22%	24%	24%	24%	24%	16%	17%	16%	17%	100%	100%
77	22%	22%	24%	24%	24%	24%	16%	17%	16%	17%	100%	100%
78	22%	22%	24%	24%	24%	24%	16%	17%	16%	17%	100%	100%
79	22%	22%	24%	24%	24%	24%	16%	17%	16%	17%	100%	100%
80	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

4. Retirement – Page 2 of 3

Probability of Service Retirement – Members Hired Before May 1, 2013															
Age	TRS Plan 1				TRS Plan 2/3						LEOFF		WSPRS		
	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 30 years	Male & Female	Male & Female	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male & Female	Male & Female	Male & Female	Male & Female	
45	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%
46	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%
47	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%
48	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%
49	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%
50	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	12%	3%	27%
51	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	7%	12%	4%	24%
52	0%	20%	36%	30%	0%	0%	0%	0%	0%	0%	0%	7%	12%	5%	24%
53	22%	20%	36%	30%	0%	0%	0%	0%	0%	0%	0%	7%	12%	10%	24%
54	22%	20%	36%	30%	0%	0%	0%	0%	0%	0%	0%	10%	16%	10%	24%
55	22%	20%	36%	30%	2%	2%	22%	19%	13%	12%	10%	20%	10%	20%	
56	22%	20%	36%	30%	2%	3%	22%	21%	15%	14%	10%	20%	10%	20%	
57	22%	20%	36%	30%	2%	4%	22%	23%	17%	16%	13%	20%	10%	20%	
58	22%	20%	39%	30%	2%	5%	28%	25%	19%	18%	13%	20%	15%	20%	
59	22%	26%	42%	30%	4%	6%	34%	27%	21%	22%	13%	20%	15%	33%	
60	22%	20%	42%	30%	6%	7%	41%	29%	23%	20%	23%	25%	15%	33%	
61	22%	23%	42%	40%	14%	15%	48%	41%	25%	22%	23%	25%	19%	33%	
62	35%	26%	56%	50%	22%	23%	55%	53%	36%	32%	23%	25%	23%	33%	
63	30%	22%	48%	46%	20%	21%	50%	49%	33%	30%	23%	25%	20%	33%	
64	25%	29%	40%	46%	55%	48%	55%	53%	55%	49%	23%	25%	20%	33%	
65	36%	36%	70%	55%	48%	40%	48%	40%	48%	40%	23%	25%	25%	100%	
66	36%	36%	70%	55%	41%	32%	41%	32%	41%	32%	23%	25%	25%	100%	
67	32%	28%	70%	55%	34%	24%	34%	24%	34%	24%	23%	25%	25%	100%	
68	28%	28%	70%	55%	27%	24%	27%	24%	27%	24%	23%	25%	25%	100%	
69	28%	28%	70%	55%	27%	42%	27%	42%	27%	42%	23%	25%	25%	100%	
70	22%	28%	100%	55%	27%	30%	27%	30%	27%	30%	100%	100%	100%	100%	
71	22%	28%	100%	55%	41%	30%	41%	30%	41%	30%	100%	100%	100%	100%	
72	22%	21%	100%	100%	55%	30%	55%	30%	55%	30%	100%	100%	100%	100%	
73	22%	21%	100%	100%	55%	30%	55%	30%	55%	30%	100%	100%	100%	100%	
74	22%	21%	100%	100%	55%	30%	55%	30%	55%	30%	100%	100%	100%	100%	
75	22%	21%	100%	100%	55%	30%	55%	30%	55%	30%	100%	100%	100%	100%	
76	22%	21%	100%	100%	55%	30%	55%	30%	55%	30%	100%	100%	100%	100%	
77	22%	21%	100%	100%	55%	30%	55%	30%	55%	30%	100%	100%	100%	100%	
78	22%	21%	100%	100%	55%	30%	55%	30%	55%	30%	100%	100%	100%	100%	
79	22%	21%	100%	100%	55%	30%	55%	30%	55%	30%	100%	100%	100%	100%	
80	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

# Summary of Actuarial Assumptions and Methods (continued)

## 4. Retirement – Page 3 of 3

Probability of Service Retirement – Members Hired on or After May 1, 2013														
Age	PERS Plan 2/3				SERS Plan 2/3				TRS Plan 2/3					
	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		Service less than 30 years		Service equal to 30 years		Service greater than 30 years	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
45	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
46	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
47	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
48	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
49	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
50	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
51	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
52	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
53	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
54	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
55	2%	2%	9%	9%	1%	2%	8%	9%	2%	2%	16%	14%	9%	9%
56	3%	2%	9%	8%	2%	2%	8%	8%	2%	3%	15%	15%	10%	10%
57	4%	2%	9%	8%	3%	2%	9%	8%	2%	4%	14%	16%	11%	11%
58	5%	2%	9%	8%	4%	3%	9%	8%	2%	5%	17%	17%	12%	13%
59	6%	4%	12%	15%	5%	4%	11%	16%	4%	6%	21%	18%	14%	15%
60	7%	6%	10%	9%	6%	5%	9%	9%	6%	7%	25%	19%	15%	14%
61	8%	13%	15%	17%	15%	13%	18%	17%	14%	15%	33%	29%	20%	19%
62	24%	20%	26%	24%	24%	21%	27%	25%	22%	23%	40%	39%	30%	28%
63	22%	18%	24%	22%	22%	20%	25%	23%	20%	21%	35%	35%	27%	26%
64	56%	56%	56%	56%	56%	52%	56%	50%	55%	48%	55%	50%	55%	48%
65	40%	40%	40%	40%	39%	36%	39%	36%	48%	40%	48%	40%	48%	40%
66	24%	24%	24%	24%	22%	24%	22%	24%	41%	32%	41%	32%	41%	32%
67	24%	24%	24%	24%	22%	23%	22%	23%	34%	24%	34%	24%	34%	24%
68	24%	24%	24%	24%	22%	22%	22%	22%	27%	24%	27%	24%	27%	24%
69	24%	24%	24%	24%	22%	21%	22%	21%	27%	42%	27%	42%	27%	42%
70	24%	24%	24%	24%	22%	20%	22%	20%	27%	30%	27%	30%	27%	30%
71	24%	24%	24%	24%	20%	19%	20%	19%	41%	30%	41%	30%	41%	30%
72	24%	24%	24%	24%	18%	18%	18%	18%	55%	30%	55%	30%	55%	30%
73	24%	24%	24%	24%	16%	17%	16%	17%	55%	30%	55%	30%	55%	30%
74	24%	24%	24%	24%	16%	17%	16%	17%	55%	30%	55%	30%	55%	30%
75	24%	24%	24%	24%	16%	17%	16%	17%	55%	30%	55%	30%	55%	30%
76	24%	24%	24%	24%	16%	17%	16%	17%	55%	30%	55%	30%	55%	30%
77	24%	24%	24%	24%	16%	17%	16%	17%	55%	30%	55%	30%	55%	30%
78	24%	24%	24%	24%	16%	17%	16%	17%	55%	30%	55%	30%	55%	30%
79	24%	24%	24%	24%	16%	17%	16%	17%	55%	30%	55%	30%	55%	30%
80	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

## 5. Disablement

Probability of Disablement – Table 1 of 2										
Age	PERS Plan 1*		PERS Plan 2/3		SERS Plan 2/3		PSERS Service less than 10 years		PSERS Service greater than 10 years	
	Male	Female	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%	0.0000%
25	0.0000%	0.0000%	0.0052%	0.0000%	0.0000%	0.0000%	0.0052%	0.0000%	0.0052%	0.0000%
30	0.0000%	0.0000%	0.0115%	0.0056%	0.0000%	0.0048%	0.0115%	0.0056%	0.0115%	0.0056%
35	0.0310%	0.0319%	0.0156%	0.0194%	0.0081%	0.0176%	0.0156%	0.0194%	0.0158%	0.0197%
40	0.0762%	0.0710%	0.0235%	0.0275%	0.0258%	0.0164%	0.0235%	0.0275%	0.0298%	0.0348%
45	0.1481%	0.1431%	0.0476%	0.0467%	0.0528%	0.0214%	0.0476%	0.0467%	0.0607%	0.0596%
50	0.2542%	0.3023%	0.0922%	0.1003%	0.1213%	0.0611%	0.0922%	0.1003%	0.1182%	0.1285%
55	0.8240%	0.6411%	0.2630%	0.2782%	0.2787%	0.1742%	0.2630%	0.2782%	0.3409%	0.3606%
60	0.7541%	0.3458%	0.7863%	0.7681%	0.6404%	0.4971%	0.7863%	0.7681%	0.0000%	0.0000%
65	0.2204%	0.0386%	0.6146%	0.5257%	0.5928%	0.4121%	0.6146%	0.5257%	0.0000%	0.0000%
70	0.0644%	0.0043%	0.1358%	0.1315%	0.1271%	0.1816%	0.0000%	0.0000%	0.0000%	0.0000%
75	0.0188%	0.0005%	0.0300%	0.0329%	0.0272%	0.0800%	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%	0.0000%

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

Probability of Disablement – Table 2 of 2							
Age	TRS Plan 1		TRS Plan 2/3		LEOFF Plan 1      Plan 2		WSPRS Plan 1/2
	Male	Female	Male	Female	Male & Female	Male & Female	Male & Female
	20	0.0013%	0.0014%	0.0003%	0.0003%	0.1000%	0.0074%
25	0.0091%	0.0092%	0.0024%	0.0019%	0.1000%	0.0191%	0.0094%
30	0.0187%	0.0190%	0.0048%	0.0040%	0.7968%	0.0467%	0.0169%
35	0.0321%	0.0326%	0.0083%	0.0068%	1.4888%	0.0807%	0.0306%
40	0.0428%	0.0434%	0.0111%	0.0091%	2.3471%	0.1360%	0.0551%
45	0.0944%	0.0957%	0.0244%	0.0201%	4.0000%	0.1796%	0.0995%
50	0.1634%	0.1656%	0.0422%	0.0347%	7.0000%	0.3236%	0.1794%
55	0.3347%	0.3393%	0.1118%	0.0750%	9.0000%	0.5534%	0.3237%
60	0.4686%	0.4750%	0.2500%	0.1875%	10.0000%	0.9462%	0.0560%
65	0.5633%	0.5681%	0.2362%	0.1552%	10.0000%	1.6180%	0.0000%
70	0.1485%	0.1486%	0.0334%	0.0283%	0.0000%	0.0000%	0.0000%
75	0.0391%	0.0389%	0.0047%	0.0052%	0.0000%	0.0000%	0.0000%
80	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%

Rates have been rounded for display purposes.

# Summary of Actuarial Assumptions and Methods (continued)

## 6. Other Terminations of Employment

Probability of Termination										
Years of Service	PERS		SERS		PSERS		TRS		LEOFF	WSPRS
	Male	Female	Male	Female	Male	Female	Male	Female	Male & Female	Male & Female
0	26.2397%	26.2397%	24.4766%	19.9030%	26.2397%	26.2397%	11.1014%	11.1340%	10.7033%	4.2261%
1	15.4534%	16.7747%	15.8775%	13.1281%	15.4534%	16.7747%	9.0312%	9.4565%	4.8058%	2.0000%
2	10.0683%	11.7007%	11.6915%	10.2908%	10.0683%	11.7007%	5.9789%	7.1731%	2.4484%	2.0000%
3	7.5236%	9.2904%	9.9510%	7.8600%	7.5236%	9.2904%	4.5105%	6.1285%	1.9350%	2.0000%
4	6.3052%	7.6024%	8.1055%	6.7558%	6.3052%	7.6024%	4.1402%	5.3084%	1.8700%	2.0000%
5	5.4443%	6.6544%	6.6418%	6.2423%	5.4443%	6.6544%	3.6847%	4.7057%	1.8050%	2.0000%
6	4.4874%	5.7856%	6.0762%	5.5595%	4.4874%	5.7856%	2.9510%	4.0862%	1.7400%	1.9000%
7	4.1778%	5.3301%	5.5588%	5.2581%	4.1778%	5.3301%	2.7214%	3.6698%	1.6750%	1.7000%
8	3.8895%	4.9105%	5.0854%	4.9707%	3.8895%	4.9105%	2.5097%	3.2957%	1.6100%	1.6000%
9	3.6211%	4.5239%	4.6524%	4.7491%	3.6211%	4.5239%	2.3144%	2.9598%	1.5450%	1.5113%
10	3.3712%	4.1677%	4.2562%	4.5725%	3.3712%	4.1677%	2.1343%	2.6581%	1.4800%	1.3426%
11	3.1386%	3.8396%	3.8938%	4.4832%	3.1386%	3.8396%	1.9683%	2.3872%	1.4150%	1.2000%
12	2.9220%	3.5373%	3.5622%	4.4156%	2.9220%	3.5373%	1.8151%	2.1439%	1.3500%	1.0765%
13	2.7204%	3.2588%	3.2589%	4.4032%	2.7204%	3.2588%	1.6739%	1.9254%	1.2850%	0.9676%
14	2.5327%	3.0023%	2.9814%	4.2560%	2.5327%	3.0023%	1.5437%	1.7291%	1.2200%	0.8701%
15	2.3579%	2.7659%	2.7275%	4.2740%	2.3579%	2.7659%	1.4235%	1.6000%	1.1550%	0.7819%
16	2.1952%	2.5482%	2.4952%	3.9160%	2.1952%	2.5482%	1.3128%	1.5500%	1.0900%	0.7015%
17	2.0437%	2.3475%	2.4500%	3.6424%	2.0437%	2.3475%	1.2106%	1.5000%	1.0250%	0.6274%
18	1.9027%	2.1627%	2.4000%	3.4565%	1.9027%	2.1627%	1.1500%	1.4500%	0.9600%	0.5589%
19	1.7714%	1.9925%	2.3500%	3.2224%	1.7714%	1.9925%	1.1250%	1.4000%	0.8950%	0.4951%
20	1.5311%	1.8001%	2.3000%	3.0000%	1.5311%	1.8001%	1.0000%	1.3000%	0.8300%	0.4354%
21	1.3244%	1.5807%	2.2500%	2.8000%	1.3244%	1.5807%	0.9500%	1.2607%	0.7650%	0.3793%
22	1.1457%	1.3880%	2.2000%	2.7000%	1.1457%	1.3880%	0.9250%	1.1837%	0.7000%	0.3264%
23	0.9910%	1.2188%	2.0870%	2.6000%	0.9910%	1.2188%	0.9000%	1.1115%	0.6350%	0.2764%
24	0.8573%	1.0702%	1.8198%	2.4750%	0.8573%	1.0702%	0.8809%	1.0436%	0.5700%	0.2289%
25	0.7415%	0.9397%	1.5868%	2.2530%	0.7415%	0.9397%	0.8213%	0.9799%	0.5050%	0.0000%
26	0.6415%	0.8252%	1.3836%	2.0508%	0.6415%	0.8252%	0.7658%	0.9201%	0.4400%	0.0000%
27	0.5549%	0.7246%	1.2065%	1.8668%	0.5549%	0.7246%	0.7140%	0.8639%	0.3750%	0.0000%
28	0.4800%	0.6363%	1.0520%	1.6993%	0.4800%	0.6363%	0.6657%	0.8111%	0.3100%	0.0000%
29	0.4152%	0.5587%	0.9173%	1.5469%	0.4152%	0.5587%	0.6207%	0.7616%	0.2450%	0.0000%
30+	0.3591%	0.4906%	0.7999%	1.4081%	0.3591%	0.4906%	0.5788%	0.7151%	0.1800%	0.0000%

Rates have been rounded for display purposes.

## 7. Future Salaries – Page 1 of 2

The following tables indicate the scale of relative salary values used to estimate future salaries for valuation purposes. In addition to increases in salary due to promotions and longevity, there is an assumed 3.75 percent per annum rate of increase in the general salary level of the membership. The salary ratio describes the final salary over the current salary.

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

# Summary of Actuarial Assumptions and Methods (continued)

## 7. Future Salaries – Page 2 of 2

Relative Salary Values				
	PERS / SERS / PSERS	TRS	LEOFF	WSPRS
Annual Percent Increase	4.74%	4.58%	5.05%	4.74%
Attributed to Growth in Active Group Size	0.95%	0.80%	1.25%	0.95%
Attributed to the Effects of Inflation on Salaries	3.75%	3.75%	3.75%	3.75%

## 8. Other Specific Assumptions that Have a Material Impact on Valuation Results

- Members of the following plans increase their Average Final Compensation by an average stated below by cashing out sick leave or annual leave pay, or by increasing overtime: PERS 1 up to 4.0 percent, TRS 1 up to 0.75 percent, LEOFF 1 up to 4.5 percent, and WSPRS 1 up to 7.0 percent.
- Post-retirement cost-of-living increases are assumed to be 3.0 percent each year for all plans including: LEOFF 1 at 3.0 percent, and qualifying PERS 1/TRS 1 receive a COLA on minimum benefit levels.
- LEOFF 2 members are assumed to disable or die due to duty-related injury or illness at a rate which varies with age. For more details, contact the Office of the State Actuary.
- Other assumptions include the probability of a vested terminated member not withdrawing his or her contributions from the plan, the probability of being married, military service, single life annuity refund on death, and beneficiary age. More details on these and other assumptions can be obtained from the Office of the State Actuary.

## 9. Change in Assumptions

### Assumption Changes

- The assumed return on investment earnings decreased from 7.90 to 7.80 percent for all plans; this decrease is consistent with current pension funding law. Note that LEOFF 2 remains at 7.50 percent. Similarly, JRS and Judges stayed at 4.00 percent.
- We reviewed all the demographic (non-economic) assumptions used in the actuarial valuation. Please see the 2007-2012 *Demographic Experience Study Report* for the assumption changes we made. Moving from 50 percent of Scale AA to Scale BB for our mortality improvement assumption had the largest impact on the valuation results.
- We updated assumed administrative factors consistent with those currently in use by the Department of Retirement Systems.

### Method Changes

We made minor changes to our valuation software for PSERS and made small changes to how we value the Basic Minimum COLA in PERS 1 and TRS 1.

Please see the *2013 Actuarial Valuation Report* for further details.

## 10. Actuarial Cost Method

Valuation assets are at market value with annual gains and losses recognized on a graded scale over an eight-year period. Additionally, the actuarial value of assets may not exceed 130 percent, nor drop below 70 percent of the market value of assets. JRS and Judges use the market value of assets for valuation assets.

### **PERS Plan 1, TRS Plan 1, LEOFF Plan 1, JRS, and Judges**

*Funding (Actual Contributions):* A variation of the Entry Age Normal (EAN) Cost Method is used for PERS 1 and TRS 1. The contribution toward the UAAL has been developed in the valuation as a level percentage of expected future covered payrolls which will amortize the UAAL over a rolling ten-year period. PERS 1 amortizes the UAAL over all PERS, SERS, and PSERS payroll, including projected system growth. TRS 1 amortizes the UAAL over all TRS payroll, including projected system growth. The UAAL rates have contribution rate ceilings effective 2009-2015. After 2015, PERS 1 has a minimum UAAL rate of 3.50 percent, and TRS 1 has a minimum UAAL rate of 5.75 percent. No contributions are required when the LEOFF 1 is fully funded. JRS and Judges are funded on a pay-as-you-go basis.

*Disclosure (Annual Required Contributions):* The funding method described in the previous paragraph for PERS 1 and TRS 1 is not an acceptable method for the GASB Statement Number 25 disclosures because it includes payroll outside the plan. In order to meet GASB Statement Number 25 requirements, the Entry Age cost method has been used for these plans. The UAAL is amortized as a level dollar amount over the applicable amortization period. PERS and TRS Plans 1 use a rolling ten-year amortization period. We report annual required contributions for JRS and Judges under the Entry Age cost method with a rolling five-year amortization period. For all other plans that use the Aggregate funding method, we calculate the annual required contributions as the contribution rate under the Aggregate method (excluding minimum contribution rates) collected over covered payroll.

### **PERS Plan 2/3, SERS Plan 2/3, TRS Plan 2/3, PSERS Plan 2, LEOFF Plan 2, and WSPRS**

The Aggregate Actuarial Cost Method is used to calculate the contribution rates. Under this method the unfunded actuarial present value of fully projected benefits is amortized over the projected earnings of the active group. The entire contribution is normal cost, and no UAAL exists. All gains and losses are amortized over future salaries of current active members. PERS 2/3, TRS 2/3, SERS 2/3, and PSERS 2 minimum contribution rates are based upon 80 percent of the Entry Age Normal Cost Rate (EANC). WSPRS minimum contribution rates are based upon 70 percent of the EANC. Similarly, LEOFF 2 minimum contribution rates are based upon 90 percent of the EANC.

## 11. Change in Funding Policy

In July 2014, the Pension Funding Council adopted contribution rates for the 2015-17 Biennium that recognize one-third of the impact of moving from 50 percent of Scale AA to 100 percent of Scale BB for assumed mortality improvements. This represents a temporary change in funding policy that may be revised by the Legislature in the future.

## 12. Material Changes in Benefit Provisions and Contribution Rates

The GASB disclosure contribution rates are based on the latest actuarial valuations as of June 30, 2013.

The following laws, enacted in 2014 had an impact on the latest actuarial valuation (i.e. legislation that produced supplemental contribution rate impacts): *None*

## Schedule of Active Member Valuation Data

### Schedule of Active Member Valuation Data: PERS Plan 1

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	5,653	\$317.8	\$56,224	0.6%
6/30/12	6,635	370.8	55,878	0.1%
6/30/11	7,733	431.8	55,842	(0.9)%
6/30/10	9,007	507.3	56,324	0.5%
6/30/09	10,354	580.2	56,034	2.4%
6/30/08	11,663	638.5	54,743	5.0%

### Schedule of Active Member Valuation Data: PERS Plan 2

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	115,751	\$6,758.5	\$58,388	1.2%
6/30/12	115,877	6,688.2	57,718	1.2%
6/30/11	117,096	6,679.4	57,042	1.3%
6/30/10	119,826	6,748.3	56,317	2.0%
6/30/09	121,800	6,723.9	55,204	4.1%
6/30/08	123,285	6,537.5	53,028	6.5%

### Schedule of Active Member Valuation Data: PERS Plan 3

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	29,302	\$1,580.8	\$53,948	0.7%
6/30/12	28,078	1,504.4	53,579	0.6%
6/30/11	27,588	1,468.9	53,245	1.1%
6/30/10	27,693	1,458.0	52,647	1.2%
6/30/09	27,081	1,408.4	52,006	4.3%
6/30/08	26,720	1,331.7	49,840	5.7%

### Schedule of Active Member Valuation Data: SERS Plan 2

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	21,760	\$622.8	\$28,620	0.4%
6/30/12	20,846	594.0	28,494	0.1%
6/30/11	20,784	591.4	28,453	0.6%
6/30/10	20,358	576.0	28,293	0.8%
6/30/09	20,197	567.0	28,072	3.5%
6/30/08	19,264	522.4	27,118	2.2%

### Schedule of Active Member Valuation Data: SERS Plan 3

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	30,535	\$891.5	\$29,195	1.3%
6/30/12	30,712	884.8	28,810	1.1%
6/30/11	31,548	898.6	28,483	1.3%
6/30/10	31,981	899.0	28,110	0.9%
6/30/09	32,277	899.5	27,869	5.7%
6/30/08	32,510	857.1	26,364	7.4%

### Schedule of Active Member Valuation Data: PSERS Plan 2

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	4,513	\$253.1	\$56,075	0.1%
6/30/12	4,250	238.0	55,999	0.7%
6/30/11	4,187	232.8	55,597	3.0%
6/30/10	4,210	227.4	54,003	4.9%
6/30/09	4,340	223.4	51,476	2.5%
6/30/08	3,981	200.0	50,231	3.1%

### Schedule of Active Member Valuation Data: TRS Plan 1

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	2,393	\$183.2	\$76,549	1.1%
6/30/12	3,019	228.5	75,681	(0.4)%
6/30/11	3,740	284.2	75,994	1.4%
6/30/10	4,591	344.0	74,930	0.3%
6/30/09	5,204	388.8	74,707	4.7%
6/30/08	6,061	432.4	71,340	6.0%

### Schedule of Active Member Valuation Data: TRS Plan 2

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	12,071	\$740.2	\$61,320	(0.5)%
6/30/12	10,849	668.8	61,648	(2.2)%
6/30/11	10,285	648.2	63,025	(0.6)%
6/30/10	9,442	598.8	63,423	(1.3)%
6/30/09	9,174	589.3	64,239	1.9%
6/30/08	8,103	510.8	63,043	1.3%

## Schedule of Active Member Valuation Data (continued)

### Schedule of Active Member Valuation Data: TRS Plan 3

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	51,471	\$3,482.7	\$67,664	2.2%
6/30/12	51,489	3,408.1	66,191	0.5%
6/30/11	52,178	3,436.7	65,866	2.3%
6/30/10	52,292	3,366.7	64,382	1.3%
6/30/09	53,010	3,367.9	63,534	6.9%
6/30/08	52,360	3,110.6	59,408	6.3%

### Schedule of Active Member Valuation Data: LEOFF Plan 1

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	143	\$14.8	\$103,362	2.5%
6/30/12	186	18.8	100,828	2.8%
6/30/11	250	24.5	98,078	1.4%
6/30/10	301	29.1	96,686	3.2%
6/30/09	356	33.3	93,679	6.4%
6/30/08	421	37.1	88,070	5.8%

### Schedule of Active Member Valuation Data: LEOFF Plan 2

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	16,687	\$1,596.8	\$95,694	2.6%
6/30/12	16,720	1,560.1	93,308	2.2%
6/30/11	16,805	1,534.7	91,322	2.8%
6/30/10	16,775	1,490.1	88,828	4.4%
6/30/09	16,951	1,442.5	85,097	5.2%
6/30/08	16,626	1,344.9	80,889	5.6%

### Schedule of Active Member Valuation Data: WSPRS Plan 1

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	657	\$53.5	\$81,465	1.5%
6/30/12	712	57.1	80,263	0.4%
6/30/11	767	61.3	79,983	(0.3)%
6/30/10	806	64.6	80,197	0.1%
6/30/09	830	66.5	80,115	4.4%
6/30/08	851	65.3	76,751	6.7%

### Schedule of Active Member Valuation Data: WSPRS Plan 2

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	409	\$26.6	\$65,058	(0.2)%
6/30/12	354	23.1	65,165	1.7%
6/30/11	315	20.2	64,103	0.7%
6/30/10	281	17.9	63,660	1.7%
6/30/09	264	16.5	62,583	9.3%
6/30/08	234	13.4	57,233	5.7%

### Schedule of Active Member Valuation Data: JRS

Valuation Data	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
6/30/13	–	\$–	\$–	(100.0)%
6/30/12	2	0.3	148,832	(3.3)%
6/30/11	3	0.5	153,962	1.4%
6/30/10	5	0.8	151,908	0.7%
6/30/09	9	1.4	150,870	6.0%
6/30/08	10	1.4	142,328	5.9%

**Note:** Averages are based on actual, not rounded amounts.  
Source: Washington State Office of the State Actuary

## Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: PERS Plan 1								
Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	1,596	\$40,451,809	2,408	\$38,081,771	51,860	\$1,177,115,047	\$22,698	0.7%
6/30/12	1,643	42,344,185	2,235	33,066,677	52,672	1,169,187,194	22,198	1.5%
6/30/11	1,829	49,678,585	2,307	31,131,283	53,264	1,151,599,650	21,621	3.6%
6/30/10	1,891	48,714,779	2,296	30,635,880	53,742	1,112,108,596	20,693	3.5%
6/30/09	1,824	47,679,971	2,258	28,065,463	54,147	1,073,997,138	19,835	3.7%
6/30/08	2,138	54,916,521	2,243	27,122,179	54,581	1,035,876,249	18,979	4.6%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: PERS Plan 2								
Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	4,167	\$82,479,614	658	\$7,214,843	31,329	\$472,011,858	\$15,066	22.1%
6/30/12	3,685	67,895,490	576	5,893,503	27,820	386,547,451	13,895	20.6%
6/30/11	3,206	59,754,016	538	5,248,298	24,711	320,615,736	12,975	23.2%
6/30/10	2,732	45,416,589	479	4,302,408	22,043	260,152,502	11,802	21.8%
6/30/09	2,461	37,668,755	469	3,848,756	19,790	213,544,944	10,791	22.0%
6/30/08	2,215	27,458,079	376	2,944,525	17,798	175,102,432	9,838	19.4%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: PERS Plan 3								
Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	414	\$4,231,693	25	\$175,440	2,139	\$18,566,461	\$8,680	31.1%
6/30/12	377	3,768,015	15	95,645	1,750	14,165,571	8,095	36.6%
6/30/11	289	2,750,573	15	115,610	1,388	10,366,918	7,469	36.8%
6/30/10	211	1,847,618	17	105,335	1,114	7,575,590	6,800	33.1%
6/30/09	188	1,431,296	11	68,324	920	5,691,504	6,186	34.6%
6/30/08	153	973,585	9	39,824	743	4,227,474	5,690	31.2%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: SERS Plan 2								
Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	729	\$7,922,612	82	\$669,493	5,084	\$47,586,513	\$9,360	21.1%
6/30/12	685	7,196,654	71	556,280	4,437	39,304,032	8,858	22.0%
6/30/11	560	5,481,726	48	331,627	3,823	32,224,861	8,429	21.8%
6/30/10	482	4,325,732	41	339,774	3,311	26,455,961	7,990	20.9%
6/30/09	454	3,836,380	32	197,969	2,870	21,890,772	7,627	23.0%
6/30/08	450	3,526,561	28	186,696	2,448	17,799,193	7,271	26.1%

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: SERS Plan 3**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	803	\$4,385,800	22	\$91,177	3,995	\$19,657,323	\$4,920	31.1%
6/30/12	636	3,285,871	27	105,484	3,214	14,992,908	4,665	28.5%
6/30/11	553	3,038,825	21	73,455	2,605	11,667,747	4,479	37.2%
6/30/10	332	1,614,718	18	51,140	2,073	8,504,426	4,102	25.6%
6/30/09	346	1,552,969	12	36,518	1,759	6,768,866	3,848	31.9%
6/30/08	325	1,370,967	15	57,309	1,425	5,130,021	3,600	37.5%

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: PSERS Plan 2**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	16	\$98,050	–	\$–	43	\$184,938	\$4,301	116.0%
6/30/12	12	46,142	–	–	27	85,628	3,171	117.6%
6/30/11	8	25,844	–	–	15	39,355	2,624	192.3%
6/30/10	5	10,383	–	–	7	13,465	1,924	339.7%
6/30/09	1	2,409	–	–	2	3,062	1,531	368.9%
6/30/08	1	653	–	–	1	653	653	0.0%

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: TRS Plan 1**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	889	\$28,516,769	1,031	\$19,814,149	35,912	\$887,718,032	\$24,719	1.2%
6/30/12	1,007	32,011,915	1,071	19,959,639	36,054	877,408,017	24,336	1.6%
6/30/11	1,161	37,444,310	1,058	18,622,578	36,118	863,605,633	23,911	4.0%
6/30/10	947	27,363,548	964	16,376,709	36,015	829,998,363	23,046	3.2%
6/30/09	1,193	33,860,034	1,040	16,463,852	36,032	804,572,786	22,329	3.9%
6/30/08	1,564	43,927,319	1,069	16,443,154	35,879	774,340,924	21,582	5.2%

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: TRS Plan 2**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	422	\$10,037,156	37	\$626,458	3,445	\$66,622,927	\$19,339	19.6%
6/30/12	424	9,371,702	21	336,553	3,060	55,682,494	18,197	20.8%
6/30/11	362	7,470,573	25	307,667	2,657	46,085,043	17,345	21.3%
6/30/10	249	5,208,999	33	383,886	2,320	37,984,977	16,373	17.7%
6/30/09	246	4,939,050	21	265,215	2,104	32,273,082	15,339	20.2%
6/30/08	244	4,076,287	29	323,867	1,879	26,844,925	14,287	19.5%

## Schedule of Retirees and Beneficiaries Added to and Removed from Rolls (continued)

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: TRS Plan 3								
Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	1,083	\$13,777,247	24	\$234,999	4,863	\$52,704,816	\$10,838	38.0%
6/30/12	896	10,668,293	26	207,788	3,804	38,191,899	10,040	39.3%
6/30/11	714	8,168,048	15	132,216	2,934	27,425,422	9,347	44.5%
6/30/10	454	4,632,283	10	73,282	2,235	18,983,833	8,494	34.9%
6/30/09	408	4,058,520	9	60,319	1,791	14,073,479	7,858	43.2%
6/30/08	360	3,056,652	11	78,741	1,392	9,828,264	7,061	47.1%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: LEOFF Plan 1								
Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	146	\$7,890,561	262	\$10,485,897	7,729	\$356,229,923	\$46,090	1.7%
6/30/12	162	9,325,170	249	9,732,437	7,845	350,199,616	44,640	3.0%
6/30/11	136	7,331,503	212	8,121,870	7,932	340,160,704	42,885	0.5%
6/30/10	167	9,065,821	246	9,545,410	8,008	338,503,613	42,271	0.3%
6/30/09	156	8,226,656	203	7,267,042	8,087	337,505,287	41,734	4.7%
6/30/08	189	9,377,706	216	7,617,139	8,134	322,365,013	39,632	4.3%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: LEOFF Plan 2								
Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	457	\$21,512,439	19	\$571,580	2,782	\$105,193,996	\$37,812	28.5%
6/30/12	355	16,447,618	26	705,284	2,344	81,874,896	34,930	25.1%
6/30/11	389	15,718,562	13	333,059	2,015	65,459,659	32,486	33.8%
6/30/10	285	10,278,954	13	332,332	1,639	48,926,257	29,851	29.2%
6/30/09	243	8,478,268	10	216,179	1,367	37,876,404	27,708	31.0%
6/30/08	227	6,985,801	17	279,908	1,134	28,904,921	25,489	33.7%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: WSPRS Plan 1								
Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	67	\$3,124,867	18	\$587,613	964	\$44,897,586	\$46,574	9.1%
6/30/12	59	2,674,231	19	715,514	915	41,147,922	44,970	6.6%
6/30/11	42	1,918,898	18	476,475	875	38,597,849	44,112	5.1%
6/30/10	33	1,549,594	16	489,562	851	36,718,045	43,147	6.0%
6/30/09	15	710,502	12	377,080	834	34,636,899	41,531	4.0%
6/30/08	28	1,152,618	18	541,668	831	33,303,079	40,076	4.8%

### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: JRS

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	7	\$476,184	12	\$877,160	114	\$9,440,927	\$82,815	(1.5)%
6/30/12	4	317,799	9	670,577	119	9,584,381	80,541	(1.7)%
6/30/11	4	285,689	5	400,572	124	9,745,840	78,595	0.1%
6/30/10	10	700,776	9	626,362	125	9,733,805	77,870	3.5%
6/30/09	4	276,433	7	497,241	124	9,401,392	75,818	0.4%
6/30/08	4	267,383	7	374,274	127	9,359,660	73,698	1.7%

### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: Judges

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	% Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
6/30/13	–	\$–	–	\$–	12	\$444,282	\$37,024	(7.7)%
6/30/12	–	–	1	18,329	12	481,349	40,116	(3.7)%
6/30/11	–	–	–	–	13	499,719	38,440	0.0%
6/30/10	–	–	–	–	13	499,719	38,440	0.0%
6/30/09	–	–	–	–	13	499,719	38,440	0.0%
6/30/08	–	–	2	–	13	499,719	38,440	(13.6)%

Source: Washington State Office of the State Actuary

# Solvency Tests

## Solvency Test: PERS Plan 1

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$662.6	\$11,371.1	\$613.4	\$12,647.1	\$8,053.1	100%	65%	0%
6/30/12	740.8	10,685.6	707.0	12,133.4	8,520.6	100%	73%	0%
6/30/11	818.7	10,677.5	852.1	12,348.4	8,883.4	100%	76%	0%
6/30/10	912.6	10,232.0	1,096.0	12,240.7	9,293.0	100%	82%	0%
6/30/09	989.9	11,269.4	1,703.2	13,962.6	9,775.6	100%	78%	0%
6/30/08	1,055.8	10,963.4	1,881.7	13,901.0	9,852.9	100%	80%	0%

## Solvency Test: PERS Plan 2/3

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$4,121.6	\$8,388.8	\$11,824.2	\$24,334.6	\$24,334.6	100%	100%	100%
6/30/12	3,878.2	6,710.3	12,064.0	22,652.6	22,652.6	100%	100%	100%
6/30/11	3,605.7	5,756.8	11,634.2	20,996.7	20,996.7	100%	100%	100%
6/30/10	3,388.0	4,753.4	11,332.7	19,474.1	19,474.1	100%	100%	100%
6/30/09	3,132.0	4,038.0	11,090.4	18,260.4	18,260.4	100%	100%	100%
6/30/08	2,760.9	3,447.1	10,484.7	16,692.7	16,692.7	100%	100%	100%

## Solvency Test: SERS Plan 2/3

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$309.2	\$1,267.1	\$1,758.3	\$3,334.6	\$3,334.6	100%	100%	100%
6/30/12	295.3	1,018.0	1,787.0	3,100.3	3,100.3	100%	100%	100%
6/30/11	279.8	862.1	1,730.3	2,872.1	2,872.1	100%	100%	100%
6/30/10	266.2	713.8	1,684.1	2,664.1	2,664.1	100%	100%	100%
6/30/09	251.5	613.7	1,637.9	2,503.2	2,503.2	100%	100%	100%
6/30/08	226.5	523.7	1,552.4	2,302.6	2,302.6	100%	100%	100%

Note: Totals may not agree due to rounding and percentages are based on actual, not rounded totals.  
Source: Washington State Office of the State Actuary

## Solvency Test: PSERS Plan 2

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$92.5	\$14.7	\$117.1	\$224.2	\$224.2	100%	100%	100%
6/30/12	76.5	9.2	94.8	180.5	180.5	100%	100%	100%
6/30/11	62.0	6.1	72.6	140.7	140.7	100%	100%	100%
6/30/10	46.9	4.2	51.7	102.9	102.9	100%	100%	100%
6/30/09	32.4	2.0	34.8	69.2	69.2	100%	100%	100%
6/30/08	18.1	0.9	19.7	38.7	38.7	100%	100%	100%

## Solvency Test: TRS Plan 1

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$433.7	\$8,511.5	\$441.0	\$9,386.1	\$6,717.1	100%	74%	0%
6/30/12	509.9	7,952.4	534.4	8,996.7	7,144.5	100%	83%	0%
6/30/11	598.1	7,934.2	662.4	9,194.7	7,485.0	100%	87%	0%
6/30/10	663.6	7,586.5	870.0	9,120.0	7,791.3	100%	94%	0%
6/30/09	725.6	8,821.7	1,264.8	10,812.1	8,146.2	100%	84%	0%
6/30/08	790.2	8,564.6	1,399.1	10,753.9	8,262.3	100%	87%	0%

## Solvency Test: TRS Plan 2/3

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$424.4	\$2,335.8	\$5,645.8	\$8,406.1	\$8,406.1	100%	100%	100%
6/30/12	402.9	1,831.7	5,523.4	7,757.9	7,757.9	100%	100%	100%
6/30/11	382.6	1,516.3	5,241.7	7,140.6	7,140.6	100%	100%	100%
6/30/10	366.3	1,224.5	5,002.5	6,593.3	6,593.3	100%	100%	100%
6/30/09	349.7	1,032.2	4,778.1	6,160.0	6,160.0	100%	100%	100%
6/30/08	322.2	883.1	4,475.8	5,681.0	5,681.0	100%	100%	100%

Note: Totals may not agree due to rounding and percentages are based on actual, not rounded totals.  
Source: Washington State Office of the State Actuary

## Solvency Tests (continued)

### Solvency Test: LEOFF Plan 1

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$27.1	\$4,254.5	\$119.4	\$4,401.0	\$5,516.4	100%	100%	100%
6/30/12	33.5	3,945.9	134.5	4,113.9	5,561.6	100%	100%	100%
6/30/11	43.3	3,898.6	196.2	4,138.0	5,565.3	100%	100%	100%
6/30/10	49.5	4,090.6	245.9	4,386.0	5,560.9	100%	100%	100%
6/30/09	55.4	4,149.8	281.2	4,486.5	5,612.1	100%	100%	100%
6/30/08	62.3	3,997.4	308.0	4,367.7	5,592.5	100%	100%	100%

### Solvency Test: LEOFF Plan 2

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$2,054.4	\$1,862.4	\$3,945.5	\$7,862.3	\$7,862.3	100%	100%	100%
6/30/12	1,925.9	1,427.7	3,868.3	7,221.9	7,221.9	100%	100%	100%
6/30/11	1,782.2	1,166.1	3,672.3	6,620.7	6,620.7	100%	100%	100%
6/30/10	1,615.0	924.7	3,503.0	6,042.7	6,042.7	100%	100%	100%
6/30/09	1,479.5	682.5	3,402.1	5,564.2	5,564.2	100%	100%	100%
6/30/08	1,319.7	547.5	3,185.5	5,052.7	5,052.7	100%	100%	100%

### Solvency Test: WSPRS Plan 1/2

Dollars in Millions

Accrued Liabilities (Entry Age Cost Method)					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
6/30/13	\$71.6	\$663.3	\$274.4	\$1,009.4	\$1,009.4	100%	100%	100%
6/30/12	70.8	576.1	334.9	981.7	981.7	100%	100%	100%
6/30/11	69.0	541.2	339.3	949.5	949.5	100%	100%	100%
6/30/10	66.4	496.5	356.7	919.6	919.6	100%	100%	100%
6/30/09	62.4	474.5	363.5	900.4	900.4	100%	100%	100%
6/30/08	56.0	460.5	353.2	869.7	869.7	100%	100%	100%

Note: Totals may not agree due to rounding and percentages are based on actual, not rounded totals.  
Source: Washington State Office of the State Actuary

## Solvency Test: JRS

Dollars in Millions

### Accrued Liabilities (Entry Age Cost Method)

Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability
6/30/13	\$-	\$108.2	\$-	\$108.2
6/30/12	1.0	100.4	2.5	103.9
6/30/11	1.5	104.3	3.6	109.3
6/30/10	2.2	78.5	3.1	83.8
6/30/09	3.7	76.1	9.5	89.3
6/30/08	3.7	78.2	9.7	91.5

### Portion of Accrued Liabilities Covered by Assets

Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
\$3.9	n/a	4%	n/a
3.5	100%	2%	0%
5.1	100%	3%	0%
3.8	100%	2%	0%
1.8	50%	0%	0%
1.0	26%	0%	0%

This is a relatively small fund administered by DRS which is funded on a pay-as-you-go basis.

## Solvency Test: Judges

Dollars in Millions

### Accrued Liabilities (Entry Age Cost Method)

Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability
6/30/13	\$-	\$3.5	\$-	\$3.5
6/30/12	-	3.6	-	3.6
6/30/11	-	3.9	-	3.9
6/30/10	-	3.2	-	3.2
6/30/09	-	3.4	-	3.4
6/30/08	-	3.5	-	3.5

### Portion of Accrued Liabilities Covered by Assets

Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
\$1.4	n/a	40%	n/a
1.9	n/a	52%	n/a
2.3	n/a	61%	n/a
2.8	n/a	87%	n/a
3.3	n/a	97%	n/a
3.6	n/a	100%	n/a

This is a relatively small fund administered by DRS which is funded on a pay-as-you-go basis.

**Note:** Totals may not agree due to rounding and percentages are based on actual, not rounded totals.  
Source: Washington State Office of the State Actuary

**Note on PERS Plan 2/3, SERS Plan 2/3, PSERS Plan 2, TRS Plan 2/3, LEOFF Plan 2 and WSPRS Plan 1/2:** The actuarial liability (AAL) presented in these charts reflects the actual actuarial valuation method (Aggregate Cost) used to calculate the annual required contributions for these plans. This Aggregate Cost method does not separately amortize unfunded actuarial liabilities and, by definition, sets the accrued liabilities equal to the assets. Therefore, the funded status is always 100%. These AAL amounts differ from those presented in the schedules of funded status and funding progress included in the Notes to the Financial Statements in the Financial Section, where a different valuation method (Entry Age) was used as a surrogate.

## Analysis of Selected Experience

### Analysis of Selected Experience: PERS Plan 1 Selected Gains and Losses During Years Ended 2008 to 2013 Resulting from Differences Between Assumed Experience and Actual Experience Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ (417.4)	\$ (340.4)	\$ (397.7)	\$ (668.0)	\$ (298.2)	\$ 151.6
Salary Gains	25.8	47.9	59.9	54.2	10.9	(59.2)
Termination of Employment	1.1	0.5	0.1	1.2	(0.2)	(0.4)
Return to Work from Terminated Status	(2.8)	(3.2)	(6.4)	(8.0)	(9.7)	(49.1)
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ (393.3)</u></b>	<b><u>\$ (295.2)</u></b>	<b><u>\$ (344.1)</u></b>	<b><u>\$ (620.6)</u></b>	<b><u>\$ (297.2)</u></b>	<b><u>\$ 42.9</u></b>

### Analysis of Selected Experience: PERS Plan 2/3 Selected Gains and Losses During Years Ended 2008 to 2013 Resulting from Differences Between Assumed Experience and Actual Experience Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ (302.6)	\$ (295.6)	\$ (404.3)	\$ (619.2)	\$ (134.3)	\$ 273.4
Salary Gains	481.1	663.9	731.7	577.8	185.9	(326.1)
Termination of Employment	131.8	129.3	118.3	18.0	21.1	47.8
Return to Work from Terminated Status	(66.3)	(58.3)	(44.1)	(50.2)	(47.8)	(97.1)
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ 244.0</u></b>	<b><u>\$ 439.3</u></b>	<b><u>\$ 401.6</u></b>	<b><u>\$ (73.6)</u></b>	<b><u>\$ 24.9</u></b>	<b><u>\$ (102.0)</u></b>

### Analysis of Selected Experience: SERS Plan 2/3 Selected Gains and Losses During Years Ended 2008 to 2013 Resulting from Differences Between Assumed Experience and Actual Experience Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ (66.4)	\$ (69.6)	\$ (80.5)	\$ (115.1)	\$ (33.2)	\$ 39.1
Salary Gains	53.1	94.1	75.1	84.5	(27.4)	(27.5)
Termination of Employment	18.0	20.3	8.3	3.1	5.8	11.0
Return to Work from Terminated Status	(4.7)	(3.5)	(5.2)	(5.5)	(6.2)	(8.4)
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ -</u></b>	<b><u>\$ 41.3</u></b>	<b><u>\$ (2.3)</u></b>	<b><u>\$ (33.0)</u></b>	<b><u>\$ (61.0)</u></b>	<b><u>\$ 14.2</u></b>

\*Actuarial value of assets  
Source: Washington State Office of the State Actuary

**Analysis of Selected Experience: PSERS Plan 2**  
**Selected Gains and Losses During Years Ended 2008 to 2013**  
**Resulting from Differences Between Assumed Experience and Actual Experience**  
Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ 0.8	\$ (0.4)	\$ 0.4	\$ (1.2)	\$ 0.4	\$ (0.3)
Salary Gains	14.1	17.7	14.9	10.3	8.5	(5.1)
Termination of Employment	3.7	7.7	4.2	4.7	(7.4)	0.4
Return to Work from Terminated Status	(0.9)	—	—	—	—	(0.9)
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ 17.7</u></b>	<b><u>\$ 25.0</u></b>	<b><u>\$ 19.5</u></b>	<b><u>\$ 13.8</u></b>	<b><u>\$ 1.5</u></b>	<b><u>\$ (5.9)</u></b>

**Analysis of Selected Experience: TRS Plan 1**  
**Selected Gains and Losses During Years Ended 2008 to 2013**  
**Resulting from Differences Between Assumed Experience and Actual Experience**  
Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ (324.0)	\$ (262.3)	\$ (247.3)	\$ (502.1)	\$ (287.8)	\$ 26.1
Salary Gains	20.6	45.5	36.5	60.7	(17.4)	(28.9)
Termination of Employment	0.3	(0.3)	0.2	0.9	1.5	0.7
Return to Work from Terminated Status	(1.6)	(2.2)	(4.4)	(7.3)	(6.0)	(23.6)
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ (304.7)</u></b>	<b><u>\$ (219.3)</u></b>	<b><u>\$ (215.0)</u></b>	<b><u>\$ (447.8)</u></b>	<b><u>\$ (309.7)</u></b>	<b><u>\$ (25.7)</u></b>

**Analysis of Selected Experience: TRS Plan 2/3**  
**Selected Gains and Losses During Years Ended 2008 to 2013**  
**Resulting from Differences Between Assumed Experience and Actual Experience**  
Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ (122.3)	\$ (142.0)	\$ (180.6)	\$ (266.8)	\$ (120.1)	\$ 66.8
Salary Gains	226.6	389.0	252.6	341.3	(67.3)	(52.7)
Termination of Employment	120.7	130.0	85.5	92.9	71.7	54.8
Return to Work from Terminated Status	(56.5)	(39.9)	(43.7)	(37.5)	(63.0)	(85.4)
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ 168.5</u></b>	<b><u>\$ 337.1</u></b>	<b><u>\$ 113.8</u></b>	<b><u>\$ 129.9</u></b>	<b><u>\$ (178.7)</u></b>	<b><u>\$ (16.5)</u></b>

\*Actuarial value of assets  
Source: Washington State Office of the State Actuary

## Analysis of Selected Experience (continued)

### Analysis of Selected Experience: LEOFF Plan 1 Selected Gains and Losses During Years Ended 2008 to 2013 Resulting from Differences Between Assumed Experience and Actual Experience Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ (118.6)	\$ (86.9)	\$ (84.2)	\$ (144.8)	\$ (88.1)	\$ 196.4
Salary Gains	3.5	4.3	6.2	1.9	(4.5)	(2.2)
Termination of Employment	(0.1)	–	(0.1)	(0.1)	0.1	(0.1)
Return to Work from Terminated Status	–	–	(0.2)	0.5	(4.3)	(2.7)
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ (115.2)</u></b>	<b><u>\$ (82.6)</u></b>	<b><u>\$ (78.3)</u></b>	<b><u>\$ (142.5)</u></b>	<b><u>\$ (96.8)</u></b>	<b><u>\$ 191.4</u></b>

### Analysis of Selected Experience: LEOFF Plan 2 Selected Gains and Losses During Years Ended 2008 to 2013 Resulting from Differences Between Assumed Experience and Actual Experience Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ 16.7	\$ (4.5)	\$ (1.9)	\$ (68.7)	\$ 19.4	\$ 135.8
Salary Gains	117.5	186.3	164.7	91.1	6.5	(29.7)
Termination of Employment	3.4	9.0	2.5	25.8	11.8	2.9
Return to Work from Terminated Status	(6.6)	(4.5)	(16.8)	(12.6)	(7.9)	(22.6)
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ 131.0</u></b>	<b><u>\$ 186.3</u></b>	<b><u>\$ 148.5</u></b>	<b><u>\$ 35.6</u></b>	<b><u>\$ 29.8</u></b>	<b><u>\$ 86.4</u></b>

### Analysis of Selected Experience: WSPRS Plan 1/2 Selected Gains and Losses During Years Ended 2008 to 2013 Resulting from Differences Between Assumed Experience and Actual Experience Dollars in Millions

Type of Activity	\$ Gain (or Loss) For Year					
	2013	2012	2011	2010	2009	2008
Investment Gains*	\$ (10.2)	\$ (6.7)	\$ (8.5)	\$ (20.5)	\$ (6.2)	\$ 28.4
Salary Gains	8.6	12.5	18.8	19.0	(0.7)	(5.9)
Termination of Employment	(0.3)	2.5	0.1	(1.0)	1.2	1.1
Return to Work from Terminated Status	(0.4)	(0.3)	(0.2)	(0.5)	(0.5)	–
<b>Gain (or Loss) During Year from Selected Experience</b>	<b><u>\$ (2.3)</u></b>	<b><u>\$ 8.0</u></b>	<b><u>\$ 10.2</u></b>	<b><u>\$ (3.0)</u></b>	<b><u>\$ (6.2)</u></b>	<b><u>\$ 23.6</u></b>

\*Actuarial value of assets  
Source: Washington State Office of the State Actuary

# Schedule of Funding Progress

<b>Schedule of Funding Progress: PERS Plan 1</b>						
<b>Dollars in Millions</b>						
	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$8,053	\$8,521	\$8,883	\$9,293	\$9,776	\$9,853
Actuarial Accrued Liability	\$12,874	\$12,360	\$12,571	\$12,538	\$13,984	\$13,901
Unfunded Actuarial Liability	\$4,821	\$3,839	\$3,688	\$3,245	\$4,209	\$4,048
Funded Ratio	63%	69%	71%	74%	70%	71%
Covered Payroll	\$318	\$371	\$432	\$507	\$580	\$638
Unfunded Actuarial Liability as a Percentage of Covered Payroll	1,517%	1,035%	854%	640%	725%	634%

<b>Schedule of Funding Progress: PERS Plan 2/3</b>						
<b>Dollars in Millions</b>						
	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$24,335	\$22,653	\$20,997	\$19,474	\$18,260	\$16,693
Actuarial Accrued Liability	\$26,540	\$22,780	\$21,627	\$20,029	\$18,398	\$16,508
Unfunded Actuarial Liability	\$2,205	\$127	\$630	\$555	\$137	\$(185)
Funded Ratio	92%	99%	97%	97%	99%	101%
Covered Payroll	\$8,339	\$8,193	\$8,148	\$8,206	\$8,132	\$7,869
Unfunded Actuarial Liability as a Percentage of Covered Payroll	26%	2%	8%	7%	2%	(2)%

<b>Schedule of Funding Progress: SERS Plan 2/3</b>						
<b>Dollars in Millions</b>						
	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$3,335	\$3,100	\$2,872	\$2,664	\$2,503	\$2,303
Actuarial Accrued Liability	\$3,581	\$3,103	\$2,956	\$2,706	\$2,493	\$2,207
Unfunded Actuarial Liability	\$247	\$3	\$84	\$41	\$(10)	\$(95)
Funded Ratio	93%	100%	97%	98%	100%	104%
Covered Payroll	\$1,514	\$1,479	\$1,490	\$1,475	\$1,467	\$1,379
Unfunded Actuarial Liability as a Percentage of Covered Payroll	16%	0%	6%	3%	(1)%	(7)%

Source: Washington State Office of the State Actuary

## Schedule of Funding Progress (continued)

<b>Schedule of Funding Progress: PSERS Plan 2</b>						
<b>Dollars in Millions</b>						
	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$224	\$180	\$141	\$103	\$69	\$39
Actuarial Accrued Liability	\$218	\$159	\$126	\$94	\$64	\$37
Unfunded Actuarial Liability	\$(7)	\$(22)	\$(14)	\$(9)	\$(5)	\$(2)
Funded Ratio	103%	114%	111%	109%	108%	106%
Covered Payroll	\$253	\$238	\$233	\$227	\$223	\$200
Unfunded Actuarial Liability as a Percentage of Covered Payroll	(3)%	(9)%	(6)%	(4)%	(2)%	(1)%

<b>Schedule of Funding Progress: TRS Plan 1</b>						
<b>Dollars in Millions</b>						
	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$6,717	\$7,145	\$7,485	\$7,791	\$8,146	\$8,262
Actuarial Accrued Liability	\$9,429	\$9,038	\$9,232	\$9,201	\$10,820	\$10,754
Unfunded Actuarial Liability	\$2,712	\$1,894	\$1,747	\$1,410	\$2,674	\$2,492
Funded Ratio	71%	79%	81%	85%	75%	77%
Covered Payroll	\$183	\$228	\$284	\$344	\$389	\$432
Unfunded Actuarial Liability as a Percentage of Covered Payroll	1,481%	829%	615%	410%	688%	576%

<b>Schedule of Funding Progress: TRS Plan 2/3</b>						
<b>Dollars in Millions</b>						
	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$8,406	\$7,758	\$7,141	\$6,593	\$6,160	\$5,681
Actuarial Accrued Liability	\$8,794	\$7,478	\$7,194	\$6,558	\$6,048	\$5,264
Unfunded Actuarial Liability	\$388	\$(280)	\$53	\$(36)	\$(112)	\$(417)
Funded Ratio	96%	104%	99%	101%	102%	108%
Covered Payroll	\$4,223	\$4,077	\$4,085	\$3,966	\$3,957	\$3,621
Unfunded Actuarial Liability as a Percentage of Covered Payroll	9%	(7)%	1%	(1)%	(3)%	(12)%

Source: Washington State Office of the State Actuary

### Schedule of Funding Progress: LEOFF Plan 1

Dollars in Millions

	2013	2012	2011	2010	2009	2008
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$5,516	\$5,562	\$5,565	\$5,561	\$5,612	\$5,592
Actuarial Accrued Liability	\$4,409	\$4,120	\$4,145	\$4,393	\$4,492	\$4,368
Unfunded Actuarial Liability	\$(1,108)	\$(1,441)	\$(1,421)	\$(1,168)	\$(1,120)	\$(1,225)
Funded Ratio	125%	135%	134%	127%	125%	128%
Covered Payroll	\$15	\$19	\$25	\$29	\$33	\$37
Unfunded Actuarial Liability as a Percentage of Covered Payroll	(7,496)%	(7,685)%	(5,794)%	(4,012)%	(3,360)%	(3,303)%

### Schedule of Funding Progress: LEOFF Plan 2

Dollars in Millions

	2013	2012	2011	2010	2009	2008
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$7,862	\$7,222	\$6,621	\$6,043	\$5,564	\$5,053
Actuarial Accrued Liability	\$7,220	\$6,353	\$5,941	\$5,164	\$4,641	\$3,998
Unfunded Actuarial Liability	\$(643)	\$(869)	\$(679)	\$(879)	\$(923)	\$(1,054)
Funded Ratio	109%	114%	111%	117%	120%	126%
Covered Payroll	\$1,597	\$1,560	\$1,535	\$1,490	\$1,442	\$1,345
Unfunded Actuarial Liability as a Percentage of Covered Payroll	(40)%	(56)%	(44)%	(59)%	(64)%	(78)%

### Schedule of Funding Progress: WSPRS Plan 1/2

Dollars in Millions

	2013	2012	2011	2010	2009	2008
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$1,009	\$982	\$949	\$920	\$900	\$870
Actuarial Accrued Liability	\$987	\$884	\$859	\$812	\$790	\$745
Unfunded Actuarial Liability	\$(22)	\$(97)	\$(90)	\$(107)	\$(110)	\$(124)
Funded Ratio	102%	111%	110%	113%	114%	117%
Covered Payroll	\$80	\$80	\$82	\$83	\$83	\$79
Unfunded Actuarial Liability as a Percentage of Covered Payroll	(28)%	(121)%	(111)%	(130)%	(133)%	(158)%

## Schedule of Funding Progress (continued)

<b>Schedule of Funding Progress: JRS</b>						
<b>Dollars in Millions</b>						
	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$4	\$3	\$5	\$4	\$2	\$1
Actuarial Accrued Liability	\$108	\$104	\$109	\$84	\$89	\$92
Unfunded Actuarial Liability	\$104	\$101	\$104	\$80	\$87	\$91
Funded Ratio	4%	3%	5%	5%	2%	1%
Covered Payroll	\$-	\$0.3	\$0.5	\$0.7	\$0.9	\$1.3
Unfunded Actuarial Liability as a Percentage of Covered Payroll	n/a	33,779%	22,574%	11,565%	9,216%	7,141%

<b>Schedule of Funding Progress: Judges</b>						
<b>Dollars in Millions</b>						
	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Actuarial Valuation Date	6/30/13	6/30/12	6/30/11	6/30/10	6/30/09	6/30/08
Actuarial Value of Plan Assets	\$1.4	\$1.9	\$2.3	\$2.8	\$3.3	\$3.6
Actuarial Accrued Liability	\$3.5	\$3.6	\$3.9	\$3.2	\$3.4	\$3.5
Unfunded Actuarial Liability	\$2.1	\$1.7	\$1.5	\$0.4	\$0.1	\$(0.1)
Funded Ratio	40%	52%	61%	87%	97%	104%
Covered Payroll	\$-	\$-	\$-	\$-	\$-	\$-
Unfunded Actuarial Liability as a Percentage of Covered Payroll	n/a	n/a	n/a	n/a	n/a	n/a

Source: Washington State Office of the State Actuary

**Note on PERS Plan 2/3, SERS Plan 2/3, PSERS Plan 2, TRS Plan 2/3, LEOFF Plan 2 and WSPRS Plan 1/2:** These plans all use the Aggregate actuarial cost method which does not identify or separately amortize unfunded actuarial accrued liabilities. For this reason, the information about funded status and funding progress shown above for these plans has been prepared using the Entry Age Actuarial Cost method and is intended to serve as a surrogate for the funded status and funding progress information of these plans, as required by GASB 50.

**Note for all plan schedules:** Liability amounts and ratios/percentages are based on actual not rounded figures.

## Funded Status and Funding Progress

### Funded Status and Funding Progress

The funded status of each plan as of June 30, 2013, the most recent actuarial valuation date

Plan	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll [(b-a)/c]
PERS 1	\$8,053.1	\$12,873.9	\$4,820.8	63%	\$317.8	1,517%
PERS 2/3*	24,334.6	26,539.5	2,204.9	92%	8,339.2	26%
TRS 1	6,717.1	9,429.3	2,712.1	71%	183.2	1,481%
TRS 2/3*	8,406.1	8,793.7	387.6	96%	4,222.9	9%
SERS 2/3*	3,334.6	3,581.4	246.7	93%	1,514.2	16%
LEOFF 1	5,516.4	4,408.6	(1,107.9)	125%	14.8	(7,496)%
LEOFF 2*	7,862.3	7,219.5	(642.8)	109%	1,596.8	(40)%
PSERS 2*	224.2	217.6	(6.6)	103%	253.1	(3)%
WSPRS 1/2*	1,009.4	987.0	(22.3)	102%	80.1	(28)%
JRS	3.9	108.2	104.3	4%	—	n/a
Judges	1.4	3.5	2.1	40%	—	n/a

\* These plans use the Aggregate actuarial cost method which does not separately amortize UAAL outside the normal cost. Therefore, as required by GASB 50, the Entry Age cost method was used to determine the UAAL. This method is intended to serve as a surrogate for the funded status and funding progress of these plans.

Note: Totals may not agree due to rounding. Percentages are calculated using unrounded totals.

Source: Washington State Office of the State Actuary

The Schedules of Funding Progress in the Actuarial Section present multi-year trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the AALs for benefits.

## Additional Information for the Defined Benefit Plans

Additional Information for the Defined Benefit Plans					
As of the Latest Valuation Shown Below – Part 1 of 2					
	PERS Plan 1	PERS Plan 2/3	TRS Plan 1	TRS Plan 2/3	SERS Plan 2/3
<b>Valuation – Date</b>	6/30/2013	6/30/2013	6/30/2013	6/30/2013	6/30/2013
<b>Actuarial Cost Method</b>	entry age normal <sup>1</sup>	aggregate <sup>2</sup>	entry age normal <sup>1</sup>	aggregate <sup>2</sup>	aggregate <sup>2</sup>
<b>Amortization Method</b>					
Funding	level % <sup>4</sup>	n/a	level % <sup>4</sup>	n/a	n/a
GASB	level\$	n/a	level\$	n/a	n/a
<b>Remaining amortization years (closed)</b>	10-year rolling	n/a	10-year rolling	n/a	n/a
<b>Remaining amortization period (closed)</b>	n/a	n/a	n/a	n/a	n/a
<b>Asset Valuation Method</b>	8-year graded smoothed fair value <sup>5</sup>				
<b>Actuarial Assumptions</b>					
Investment Rate of Return <sup>7</sup>	7.80%	7.80%	7.80%	7.80%	7.80%
Projected Salary Increases					
Salary Inflation at 3.75%, Plus the Merit Increases Described Below:					
Initial Salary Merit (Grades Down to 0%)	6.0%	6.0%	5.1%	5.1%	6.6%
Merit Period (Years of Service)	17 yrs	17 yrs	25 yrs	25 yrs	20 yrs
<b>Includes Inflation at (percentage)</b>	n/a	3.00%	n/a	3.00%	3.00%
<b>Cost of Living Adjustments</b>	Minimum COLA <sup>6</sup>	CPI increase, maximum 3%	Minimum COLA <sup>6</sup>	CPI increase, maximum 3%	CPI increase, maximum 3%

<sup>1</sup> PERS and TRS Plans 1 use a variation of the Entry Age cost method, whereas LEOFF 1 uses a variation of the Frozen Initial Liability (FIL) cost method.

<sup>2</sup> The aggregate cost method does not identify or separately amortize unfunded actuarial accrued liabilities.

<sup>3</sup> Pay As You Go basis for funding.

<sup>4</sup> Level percent of system payroll, including assumed system growth.

<sup>5</sup> Asset Valuation Method– 8 Year Smoothed Fair Value

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

Annual Gain/Loss		
Rate of Return	Smoothing Period	Annual Recognition
14.9% and up	8 years	12.50%
13.9-14.9%	7 years	14.29%
12.9-13.9%	6 years	16.67%
11.9-12.9%	5 years	20.00%
10.9-11.9%	4 years	25.00%
9.9-10.9%	3 years	33.33%
8.9-9.9%	2 years	50.00%
6.9-8.9%	1 year	100.00%
5.9-6.9%	2 years	50.00%
4.9-5.9%	3 years	33.33%
3.9-4.9%	4 years	25.00%
2.9-3.9%	5 years	20.00%
1.9-2.9%	6 years	16.67%
0.9-1.9%	7 years	14.29%
0.9% and lower	8 years	12.50%

Source: Washington State Office of the State Actuary

**Additional Information for the Defined Benefit Plans**  
**As of the Latest Valuation Shown Below – Part 2 of 2**

PSERS Plan 2	LEOFF Plan 1	LEOFF Plan 2	WSPRS Plan 1/2	Judicial	Judges
6/30/2013	6/30/2013	6/30/2013	6/30/2013	6/30/2013	6/30/2013
aggregate <sup>2</sup>	frozen initial liability <sup>1</sup>	aggregate <sup>2</sup>	aggregate <sup>2</sup>	entry age <sup>3</sup>	entry age <sup>3</sup>
n/a	level % <sup>4</sup>	n/a	n/a	n/a	n/a
n/a	level\$	n/a	n/a	level\$	level\$
n/a	11.00	n/a	n/a	5-year rolling	5-year rolling
n/a	6/30/2024	n/a	n/a	n/a	n/a
8-year graded smoothed fair value <sup>5</sup>	market	market			
7.80%	7.80%	7.50%	7.80%	4.00%	4.00%
6.0%	10.7%	10.7%	8.5%	0.0%	0.0%
17 yrs	25 yrs	25 yrs	27 yrs	n/a	n/a
3.00% CPI increase, maximum 3%	3.00% CPI increase	3.00% CPI increase, maximum 3%	3.00% CPI increase, maximum 3%	3.00% CPI increase, maximum 3%	3.00% none

<sup>6</sup>The PERS 1 and TRS 1 COLA  
Qualifying retirees receive an increase in their monthly benefit once a year. The COLA on minimum benefit levels is calculated as the last unrounded COLA amount increased by 3%, rounded to the nearest penny. These are some historical monthly COLA amounts per year of service:

**Historical Monthly COLA  
Amounts per Year of Service**

Date	COLA Type	Amount
7/1/2009	Uniform	\$1.83
7/1/2010	Uniform	\$1.88
7/1/2011	Minimum	\$1.94
7/1/2012	Minimum	\$2.00
7/1/2013	Minimum	\$2.06
7/1/2014	Minimum	\$2.12

<sup>7</sup>The Legislature prescribes the assumed rate of investment return for all plans except Judicial and Judges.

# Required Contribution Rates

## Required Contribution Rates

Expressed as a percentage of current-year covered payroll at the close of Fiscal Year 2014

	Employer Actual Contribution Rates			Employee Actual Contribution Rates		
	Plan 1	Plan 2	Plan 3	Plan 1	Plan 2	Plan 3
<b>PERS</b>						
<b>Members Not Participating in JBM</b>						
State agencies*	9.21%	9.21%	9.21%**	6.00%	4.92%	***
Local governmental units*	9.21%	9.21%	9.21%**	6.00%	4.92%	***
State government elected officials*	13.73%	9.21%	9.21%**	7.50%	4.92%	***
<b>Members Participating in JBM</b>						
State agencies*	11.71%	11.71%	11.71%**	9.76%	9.80%	7.50%****
Local governmental units*	9.21%	9.21%	9.21%**	12.26%	12.30%	7.50%****
<b>SERS</b>						
State agencies*	n/a	9.82%	9.82%**	n/a	4.64%	***
Local governmental units*	n/a	9.82%	9.82%**	n/a	4.64%	***
<b>PSERS</b>						
State agencies*	n/a	10.54%	n/a	n/a	6.36%	n/a
Local governmental units*	n/a	10.54%	n/a	n/a	6.36%	n/a
<b>TRS</b>						
<b>Members Not Participating in JBM</b>						
State agencies*	10.39%	10.39%	10.39%**	6.00%	4.96%	***
Local governmental units*	10.39%	10.39%	10.39%**	6.00%	4.96%	***
State government elected officials*	10.39%	10.39%	10.39%**	7.50%	4.96%	***
<b>Members Participating in JBM</b>						
State agencies*	10.39%	n/a	n/a	9.76%	n/a	n/a
<b>LEOFF</b>						
Local governmental units*	0.18%	5.23%	n/a	n/a	8.41%	n/a
Ports and universities*	n/a	8.59%	n/a	n/a	8.41%	n/a
State of Washington	n/a	3.36%	n/a	n/a	n/a	n/a
<b>WSPRS</b>						
State agencies*	8.09%	8.09%	n/a	6.59%	6.59%	n/a

\* Employer rates include an administrative expense rate of 0.18%

\*\* Plan 3 defined benefit portion only

\*\*\* Variable from 5% to 15% based on rate selected by the member

\*\*\*\* Minimum rate

# Schedule of Contributions from Employers and Other Contributing Entities

## Schedule of Contributions from Employers and Other Contributing Entities

The Following Schedule Covers the Fiscal Years Ended 2009-2014 – Dollars in Millions

	Annual Required Contribution*					
	2014	2013	2012	2011	2010	2009
PERS Plan 1	\$670.9	\$534.2	\$508.0	\$439.3	\$627.8	\$620.2
PERS Plan 2/3	612.0	408.3	407.7	408.6	383.1	369.7
SERS Plan 2/3	124.5	86.6	85.2	88.6	82.3	71.5
PSERS 2	18.6	15.1	14.7	14.7	14.8	14.3
TRS Plan 1	388.6	275.4	254.0	205.9	406.1	391.0
TRS Plan 2/3	335.4	231.6	232.2	232.3	221.1	186.9
LEOFF Plan 1	0.0	0.0	0.0	0.0	0.0	0.0
LEOFF Plan 2	116.9	94.7	97.3	84.0	112.2	105.3
WSPRS Plan 1/2	7.3	2.5	2.9	2.3	6.6	5.0
JRS	22.5	21.7	22.6	18.6	20.4	21.2
Judges	0.5	0.4	0.3	0.1	0.0	0.0

  

	Percentage Contributed					
	2014	2013	2012	2011	2010	2009
PERS Plan 1	67%	50%	51%	33%	25%	52%
PERS Plan 2/3	70%	95%	94%	80%	85%	119%
SERS Plan 2/3	71%	91%	88%	70%	75%	89%
PSERS 2	92%	104%	104%	106%	103%	101%
TRS Plan 1	52%	43%	44%	47%	28%	46%
TRS Plan 2/3	74%	99%	92%	72%	75%	86%
LEOFF Plan 1	n/a	n/a	n/a	n/a	n/a	n/a
LEOFF Plan 2	121%	144%	137%	157%	114%	122%
WSPRS Plan 1/2	90%	260%	224%	228%	80%	127%
JRS	47%	47%	36%	59%	57%	49%
Judges	n/a	n/a	n/a	n/a	n/a	n/a

\*The Annual Required Contribution (ARC) changes each year with the experience of the plans. Factors influencing the experience include changes in funding methods, assumptions, plan provisions, and economic and demographic gains and losses. The methods used to derive the ARC for this accounting disclosure are different from the methods used to derive the actual contributions required by law. These differences include the use of different actuarial valuations (actual contributions may be based on an earlier valuation), and different actuarial cost methods. For these reasons, the actual contributions will not match the Annual Required Contributions. Starting in 2009, we calculated the ARC for PERS and TRS Plans 1 under the Entry Age Normal Cost method with a rolling 10-year amortization (excluding the temporary rate ceilings). Starting in 2011, the calculation of the ARC reflects the underlying actuarial cost method (excluding minimum contribution rates).

Source: Washington State Office of the State Actuary

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