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Oklahoma State Pension Commission

Summary of Actuarial Reports

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- **NEPC is asked to review the Oklahoma State Pension Plans from an actuarial standpoint**
- **Oklahoma Retirement System comprises seven plans**
 - Teachers' Retirement System of Oklahoma ("Teachers')
 - Oklahoma Public Employees Retirement ("PERS")
 - Oklahoma Firefighters Pension and Retirement System ("Firefighters")
 - Oklahoma Police Pension and Retirement System ("Police")
 - Oklahoma Law Enforcement Retirement System ("Law Enforcement")
 - State of Oklahoma Uniform Retirement System for Justices and Judges ("Justices and Judges")
 - Retirement Plan for Full-Time Employees of the Department of Wildlife Conservation ("Wildlife")
- **Information contained in this report is based on July 1, 2014 Actuarial Valuation reports from plan actuaries¹**
 - Funded status is based on each plan's funding policy
 - This presentation does not summarize GASB 67 reporting requirements
- **The goals of this presentation are:**
 - To present the funded position of the seven pension plans
 - To review the comprehensive return performance of both asset and liabilities
 - To assess the actuarial assumptions and methods for reasonability
 - To note changes in legislation that affect the plans

1. Buck Consultants, Cavanaugh Macdonald Consulting, and Gabriel, Roeder, Smith & Company

- **Funded status of the overall plans has increased since the July 2013 valuations**
 - Aggregate funded status for the plans was **72.5%** as of July 1, 2013, vs. 66.5% as of July 1, 2013
- **Average asset return on the plans' Market Value was 19.7% for the fiscal year ending June 30, 2014**
 - However, average asset return on the plans' Actuarial Value was **14.5%** for the fiscal year ending June 30, 2014
 - Gains and losses are recognized over 5 years
 - 2008-09 losses are fully recognized
 - 14.5% is higher than the assumed expected return in the plans of 7.0% to 8.0%
- **The Teachers' plan remains the largest and one of the most poorly funded of the seven plans**
 - \$19.6 billion in liabilities, \$12.4 billion in assets, 63.2% funded
 - If current funding and benefit levels continue, Unfunded Accrued Liability will be funded after 11 years (was 17 years in 2013)
 - Prior to 2011, actuaries projected the period needed to fund Unfunded Accrued Liability as "infinite"

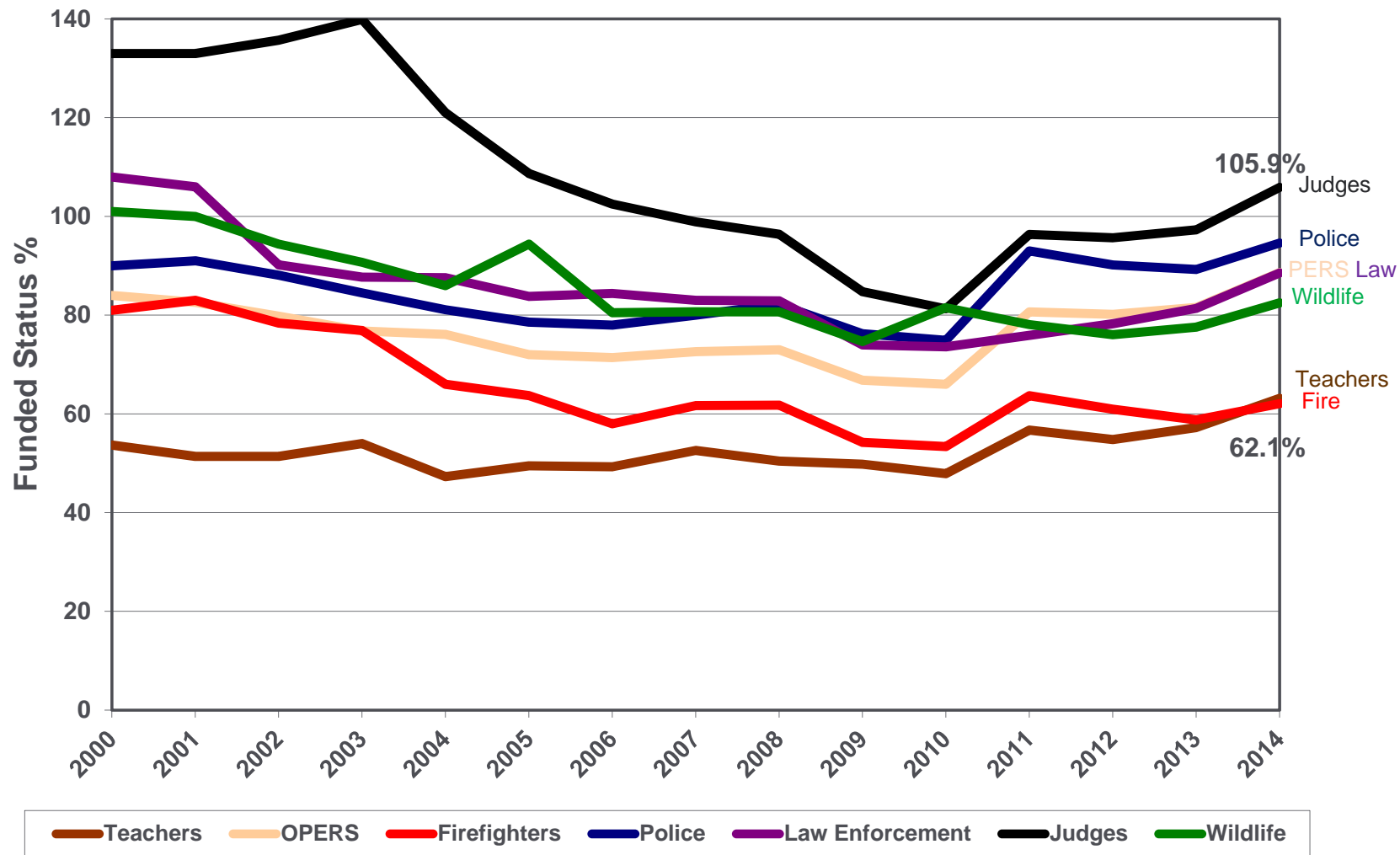
System Summary – Funded Position

Plan	Actuarial Value of Assets (in millions)	Actuarial Accrued Liability (in millions)	Funded Status as of 7/1/2014	Funded Status as of 7/1/2013
Teachers	\$12,368	\$19,576	63.2%	57.2%
Public Employees (PERS)	\$7,759	\$8,754	88.6%	81.6%
Firefighters	\$2,002	\$3,225	62.1%	58.8%
Police	\$2,086	\$2,205	94.6%	89.3%
Law Enforcement	\$811	\$916	88.6%	81.4%
Judges	\$274	\$259	105.9%	97.3%
Wildlife	\$90	\$109	82.5%	77.6%
Total	\$25,391	\$35,044	72.5%	66.5%

- **Overall funded status of the plans has increased since fiscal 2013**
 - Strong markets have led to higher than expected asset returns
 - 19.7% return on Market Value basis, 14.5% return on Actuarial Value basis
 - Meanwhile, total plan liabilities grew by 3.1% over the last year
- **Average public pension plan was 71.8% funded in FY 2013¹**

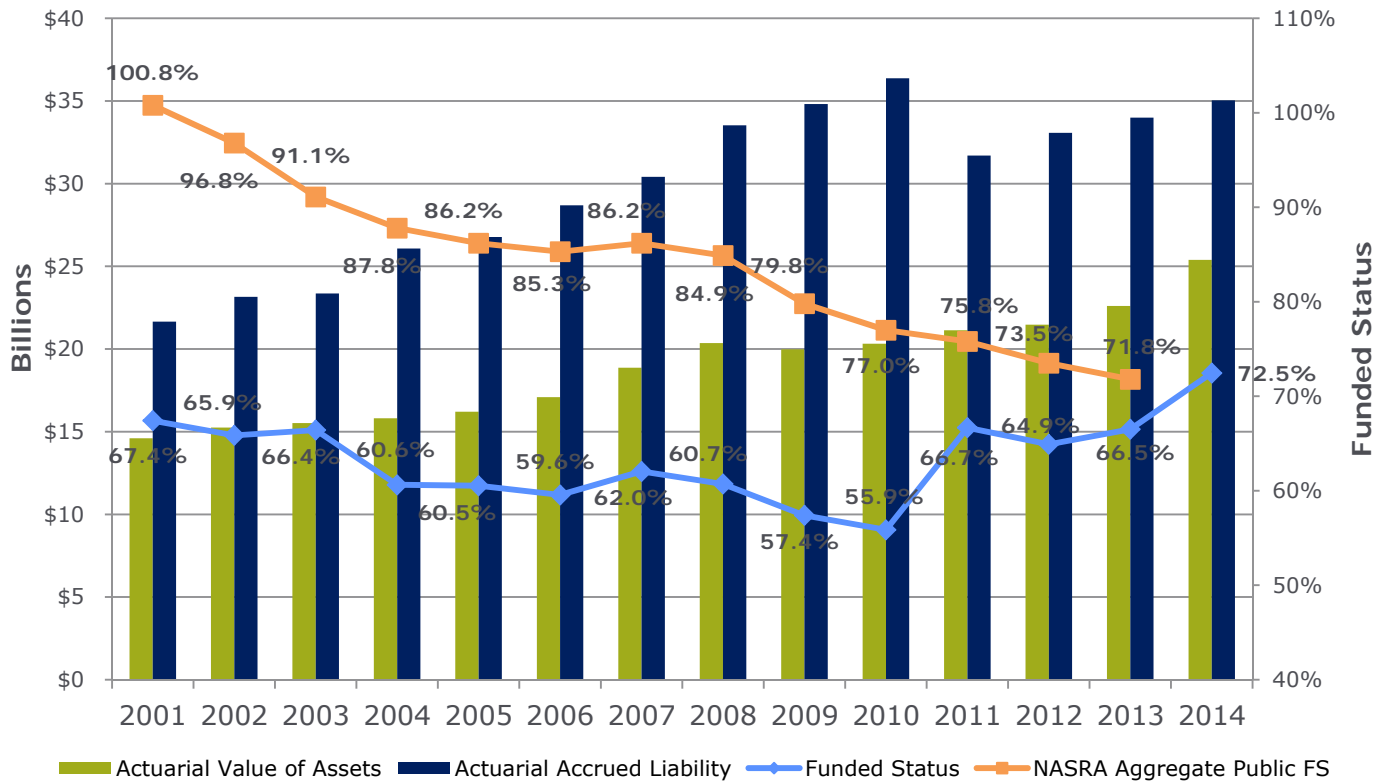
1. Average public plan results from the Public Fund Survey Summary Findings for FY 2013 (published December 2014 by the National Association of State Retirement Administrators), representing 85% of the state/local government pension community

Funded Status History (Actuarial Basis)



Sources: 2000 to 2009: Buck Consultants, Milliman Consultants and Actuaries, and Gabriel, Roeder, Smith & Company
 2010 and later: Buck Consultants, Cavanaugh Macdonald Consulting, and Gabriel, Roeder, Smith & Company

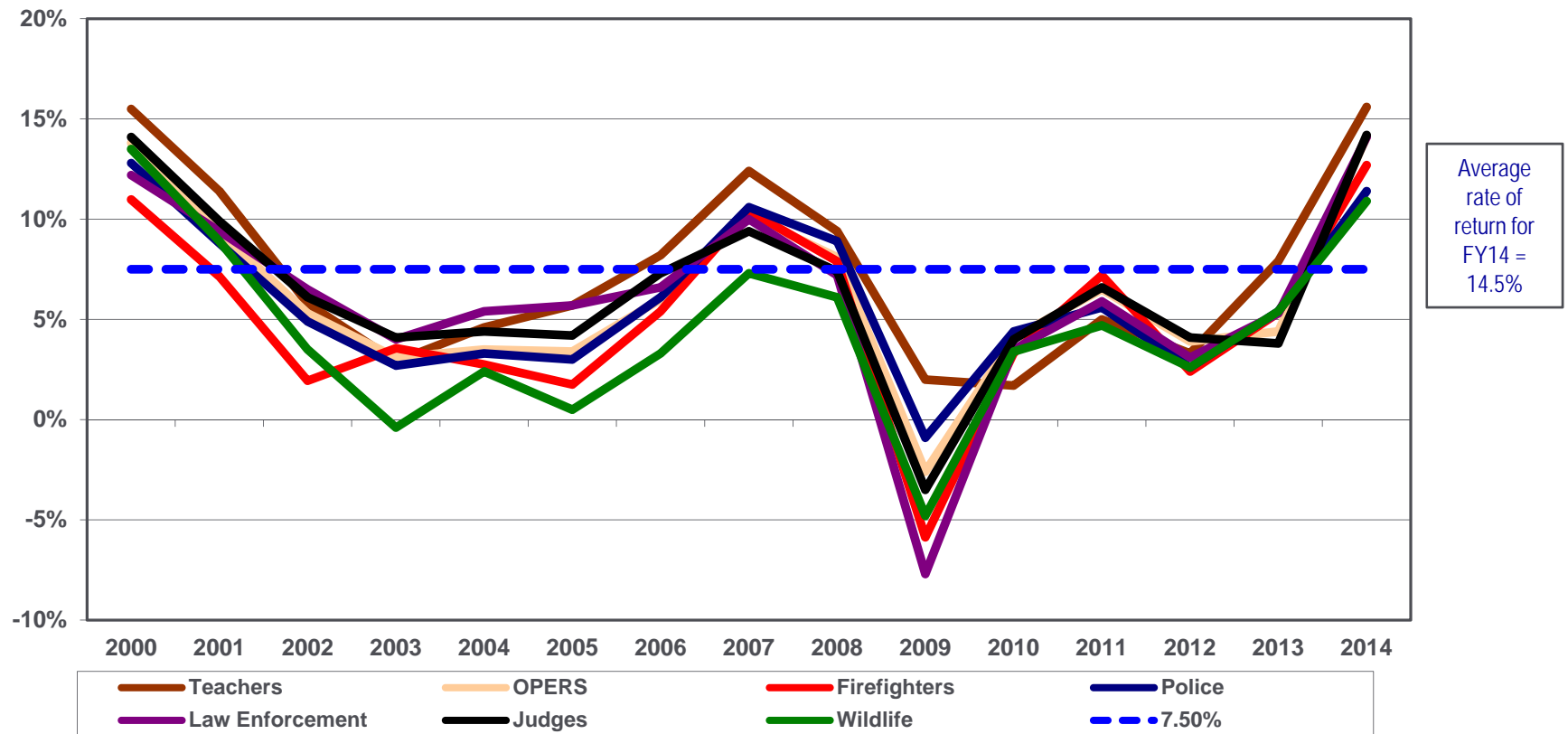
Funded Status History vs. Average Public Fund (Combined Plans)



- The Oklahoma plans' aggregate funded status has consistently trailed the funded status of the average public plan¹
- However, since 2011 after legislative changes were implemented in Oklahoma regarding COLAs and strong market returns, there has been considerable improvement and convergence

1. Average public plan results from the Public Fund Survey Summary Findings for FY 2013 (published December 2014 by the National Association of State Retirement Administrators), representing 85% of the state/local government pension community

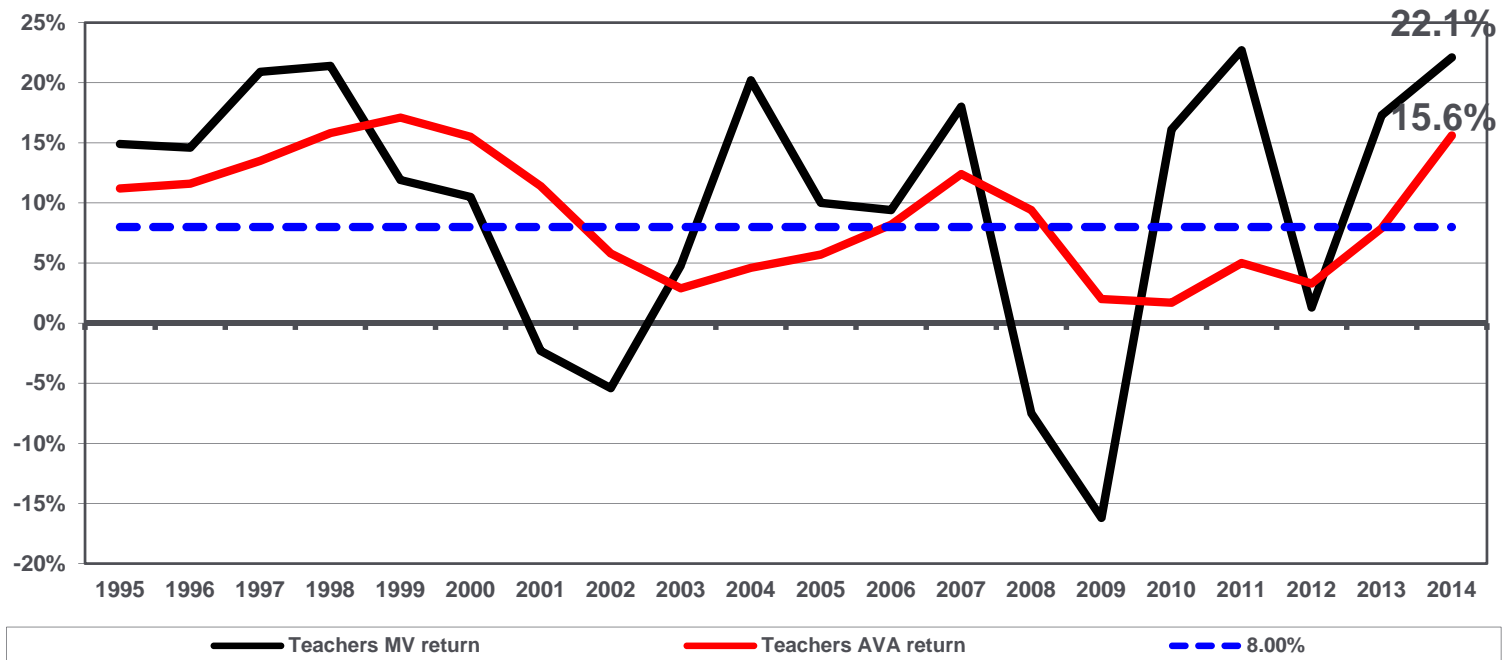
Investment Return on Actuarial Value of Assets



- Since the 2008-09 losses have been fully recognized as of June 30, 2013 and strong performance has continued, fiscal 2014 Actuarial Values have seen more gains recognized

Sources: 2000 to 2009: Buck Consultants, Milliman Consultants and Actuaries, and Gabriel, Roeder, Smith & Company
 2010 and later: Buck Consultants, Cavanaugh Macdonald Consulting, and Gabriel, Roeder, Smith & Company

Investment Return (Teachers' Plan)



- The Teachers' plan has the highest assumed return of all the Oklahoma plans at 8.0%
- Actuarial Value tends to lag the Market Value as gains and losses are smoothed in over 5 years
 - Helps smooth fluctuations in funded status and keep expected return close to assumed rate

Sources: 1999 and earlier: R.V. Kuhns & Associates. 2000 and later: Gabriel, Roeder, Smith & Company

- **House Bill 2630 (OPERS)**
 - Effective November 1, 2015, OPERS shall create a defined contribution plan for most people first employed by a participating employer. Exemptions from the new defined contribution plan include hazardous duty members and district attorneys, assistant district attorneys and employees of the district attorney’s office.
- **Senate Bill 2120 (OPERS)**
 - Amends House Bill 2630 to further exempt from the new defined contribution plan county elected officials and employees of a county, county hospital, city or town, conservation district, circuit engineering district, and any public or private trust in which a county, city or town participates. Senate Bill 2120 also states that employees who participate in the defined contribution system are excluded from the \$105 health care subsidy.
- **House Bill 2622 (Law Enforcement)**
 - Resets amortization period to 15 years
- **Senate Bill 232 (Law Enforcement)**
 - Grants salary increases to most active members
- **Senate Bill 2024 (Firefighters)**
 - Reset amortization period to 30 years beginning 7/1/2014

System Summary – Cost and Contributions

- The following table summarizes the State-only contribution requirements for the 2014 and 2015 fiscal years

Pension Plan	FY 2014 State Contribution Requirements			FY 2015 State Contribution Requirements	
	Total post-EE Contribution as % Pay	Total post-EE Contribution Required (\$)	Actual post-EE Contribution (\$)	Total post-EE Contribution as % Pay	Total post-EE Contribution Required (\$)
Teachers*	5.3%	\$219	\$296	3.8%	\$245
OPERS	15.3%	\$259	\$280	11.5%	\$201
Firefighters	49.8%	\$126	\$80	39.3%	\$104
Police	19.4%	\$54	\$31	9.1%	\$26
Law Enforcement	48.4%	\$36	\$21	26.3%	\$20
Judges	21.0%	\$7	\$5	14.3%	\$5
Wildlife	30.1%	\$4	\$4	27.1%	\$4
Total as % of Payroll	11.0%		11.2%	9.4%	
Total in Millions \$	\$706	\$706	\$717	\$605	\$605

* Teachers plan is estimated by subtracting expected Employer contributions of 9.3% of payroll from the calculated ARC

- For fiscal year ending 2014, the recommended contribution to the Oklahoma pension plans was \$706 million, or 11.0% of total payroll
 - \$717 million was actually contributed, or 102% of required
 - Average percentage of required contributions paid by public plans was approximately 89% in 2013¹
- For fiscal year ending 2015, the recommended contribution is \$605 million and 9.4% of payroll, \$101 million lower than last year

1. Results from the Public Fund Survey Summary Findings for FY 2013, published December 2014 by the National Association of State Retirement Administrators

Contribution History – State and Municipalities

Required Employer Contribution (assuming GASB 25 funding requirements) - After reduction for estimated Employee contributions

	7/1/04	7/1/05	7/1/06	7/1/07	7/1/08	7/1/09	7/1/10	7/1/11	7/1/12	7/1/13	7/1/14
Teachers*	\$722	\$535	\$576	\$591	\$714	\$742	\$822	\$588	\$620	\$603	\$551
OPERS	\$266	\$310	\$339	\$364	\$323	\$389	\$402	\$240	\$257	\$259	\$201
Firefighters**	\$107	\$118	\$147	\$147	\$158	\$187	\$196	\$142	\$159	\$162	\$142
Police**	\$74	\$85	\$95	\$101	\$103	\$132	\$147	\$65	\$79	\$90	\$64
Law Enforcement**	\$25	\$30	\$33	\$33	\$37	\$48	\$50	\$49	\$45	\$44	\$29
Judges	\$2	\$4	\$6	\$8	\$8	\$11	\$13	\$7	\$7	\$7	\$5
Wildlife	\$2	\$3	\$3	\$3	\$3	\$4	\$3	\$4	\$4	\$4	\$4
Total	\$1,198	\$1,086	\$1,197	\$1,246	\$1,374	\$1,514	\$1,633	\$1,094	\$1,171	\$1,169	\$995

Actual Employer Contribution

	7/1/04	7/1/05	7/1/06	7/1/07	7/1/08	7/1/09	7/1/10	7/1/11	7/1/12	7/1/13	7/1/14
Teachers*	\$406	\$460	\$536	\$597	\$619	\$621	\$638	\$682	\$701	\$707	TBD
OPERS	\$140	\$171	\$198	\$220	\$243	\$260	\$253	\$263	\$270	\$280	TBD
Firefighters**	\$82	\$82	\$118	\$83	\$83	\$82	\$92	\$101	\$111	\$116	TBD
Police**	\$49	\$50	\$56	\$56	\$59	\$55	\$56	\$61	\$66	\$67	TBD
Law Enforcement**	\$21	\$22	\$24	\$25	\$25	\$23	\$25	\$26	\$28	\$30	TBD
Judges	\$1	\$1	\$1	\$2	\$2	\$9	\$3	\$4	\$4	\$5	TBD
Wildlife	\$3	\$3	\$3	\$3	\$3	\$4	\$3	\$4	\$4	\$4	TBD
Total	\$701	\$788	\$936	\$986	\$1,034	\$1,054	\$1,070	\$1,141	\$1,184	\$1,208	TBD

Percent of Required Employer Contribution Actually Contributed

	7/1/04	7/1/05	7/1/06	7/1/07	7/1/08	7/1/09	7/1/10	7/1/11	7/1/12	7/1/13	7/1/14
Teachers*	56%	86%	93%	101%	87%	84%	78%	116%	113%	117%	TBD
OPERS	53%	55%	58%	61%	75%	67%	63%	110%	105%	108%	TBD
Firefighters**	77%	70%	80%	56%	53%	44%	47%	71%	70%	71%	TBD
Police**	66%	59%	59%	56%	57%	41%	38%	94%	84%	74%	TBD
Law Enforcement**	85%	73%	75%	77%	68%	48%	50%	53%	62%	68%	TBD
Judges	23%	18%	20%	22%	27%	81%	24%	57%	57%	66%	TBD
Wildlife	119%	96%	104%	97%	100%	100%	100%	108%	96%	100%	TBD
Total	58%	73%	78%	79%	75%	70%	66%	104%	101%	103%	TBD

* Teachers plan contributions include State, Employer, and Federal funds

** Contributions include State and Agency or Municipality funds

System Summary – Contribution Rates

- The following table summarizes the current Employee and Employer contribution rates as of July 1, 2014 as a % of payroll

Pension Plan	EE Contribution Rate	Employer + Federal Mandated Contrib rate	Municipality / Agency Mandated Contrib rate	State Mandated Contrib rate
Teachers	7.0%	EESIP: 9.5% Non-EESIP: 8.55% Federal grants: 8.25%*		5% of tax and lottery revenue
OPERS	3.5%			16.5%
Firefighters	9.0%		14.00%	36% of insurance premium tax
Police	8.0%		13.0%	14% of insurance premium tax + a % of special tax credit fund
Law Enforcement	8.0%		11.0%	5.0% of insurance premium tax + 1.2% of drivers license tax
Judges	8.0%			16.0%
Wildlife	5.0%			

* Represent FY 2015 rates

System Summary - Characteristics and Assumptions

- **The plans' assumptions are within a reasonable range**
- **Investment return assumptions (8.0% for Teachers, 7.0% for Wildlife, 7.5% for all other plans) are in line with other public funds; but these (particularly 8.0% assumption) have faced increased pressure lately**
 - Median discount rate for public plans was 7.75% in 2013¹; further declines are likely
- **All plans have in place long term amortization schedules to fund the Unfunded Accrued Liability**
 - However some schedules are "open" (re-determined each year) and some "closed"
 - Some plans which had "closed" amortization schedules are currently amortizing their unfunded liability over shorter timeframes
 - Oklahoma plans are currently amortizing over ...
 - 5 years – open (Police) - changed to a 5-year open schedule this year
 - 13 years – closed (Judges and OPERS)
 - 15 years – closed (Law Enforcement) – increased from 7 to 15 years this year
 - 30 years – closed (Firefighters) – increased from 19 to 30 years this year
 - 30 years - open (Teachers)
- **All plans employ similar actuarial asset valuation methods, where gains and losses are smoothed over 5 years**

1. Results from the Public Fund Survey Summary Findings for FY 2013, published December 2014 by the National Association of State Retirement Administrators

Summary and Conclusions

- **In aggregate, the State's plans are 72.5% funded as of June 30, 2014**
 - Funded status increased across all plans
 - Firefighters' plan is the least funded at 62.1%
- **Strong asset performance in the 2014 fiscal year helped boost funded status**
 - In addition, some employees' payroll less than assumed created lower liabilities than expected
 - 2008/09 losses have been fully recognized and now more gains are being recognized in the Actuarial Value of Assets
- **Recent legislative changes to boost contributions and dampen liability growth have also helped improve funded status**
 - New legislation creating a defined contribution plan for new OPERS employees could significantly reduce the cost of, and the active payroll of, the defined benefit plan
- **The plans' assumptions are within a reasonable range, but investment return expectations continue to be muted, thus putting pressure on the long-term ROA assumptions for the Teachers' plan**
- **GASB 67 reporting is required for fiscal 2014, and GASB 68 reporting is required for fiscal 2015**
 - Separates funding and accounting reporting
 - Funding policies may need to be formalized in absence of the GASB "ARC"