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# *Indiana Public Retirement System*

Public Employees' Retirement Fund

Actuarial Valuation as of  
June 30, 2013



December 17, 2013

Board of Trustees  
Indiana Public Retirement System  
1 North Capitol, Suite 001  
Indianapolis, IN 46204

**Re: Certification of the Actuarial Valuations of the Indiana Public Retirement System as of June 30, 2013**

Dear Board of Trustees:

Actuarial valuations are performed annually for the Indiana Public Retirement System ("INPRS") defined benefit pension plans ("Plans"). The results of the latest actuarial valuations for all plans other than the Teachers' Retirement Fund were prepared as of June 30, 2013 and are presented in individual valuation reports pursuant to the engagement letter between INPRS and PricewaterhouseCoopers LLP ("PwC"), dated June 7, 2010. The reports are intended to provide the Board of Trustees ("Board") with information on the funded status of the Plans, development of the contribution rates, and certain financial statement disclosure information.

Under Indiana statutes, employer contribution rates and amounts, as applicable, are adopted annually for each Plan by the Board. The contributions are actuarially determined based on the funding policy, actuarial assumptions, and actuarial methods adopted by the Board. Contributions determined by the actuarial valuation become effective either twelve or eighteen months after the valuation date, depending on the applicable employer. Therefore, contribution rates determined by the June 30, 2013 actuarial valuation and adopted by the Board will become effective on either July 1, 2014 or January 1, 2015. If new legislation is enacted between the valuation date and the date the contributions become effective, the Board may adjust the recommended contributions before adopting them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

**Financing Objectives and Funding Policy**

In setting contribution levels, the Board's principal objectives have been:

- To set contributions such that the unfunded actuarial accrued liability ("UAAL") will be amortized over a period not greater than 30 years.
- To set contributions such that they remain relatively level over time.

To accomplish this, the Board's funding policy requires that employer contributions be equal to the sum of the employer normal cost (which pays the current year cost of benefits accruing) and an amortization of the UAAL in equal installments.

**Progress Toward Realization of Financing Objectives**

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a Plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches 100%. The combined funded ratio for all Plans (excluding the Teachers' Retirement Fund) increased by 4.2% from the preceding year to 83.4%, primarily due to delayed recognition of prior asset gains from fiscal 2010 and 2011 in the Actuarial Value of Assets and additional contributions made to certain plans pursuant to 2012 House Bill 1376.

**Benefit Provisions**

The benefit provisions reflected in the valuation reports are those which were in effect at June 30, 2013, as set forth in the related Indiana statutes. Material changes in benefit provisions since the 2012 valuation include the decision to modify ASA annuitizations for Public Employees' Retirement Fund (PERF) starting October 1, 2014 and amending several features of Prosecuting Attorneys' Retirement Fund to be similar to Judges' Retirement System pursuant to 2013 House Bill 1057. There were no other material changes in benefit provisions since the 2012 valuations.



### Assets and Member Data

The valuations were based on asset values of the trust funds and member census data as of June 30, 2013. All asset information and member data were provided by INPRS. While certain checks for reasonableness were performed, the data was used unaudited. The accuracy of the results presented in the reports is dependent upon the accuracy and completeness of the underlying asset and census information.

### Actuarial Assumptions and Methods

The majority of the actuarial assumptions used in the June 30, 2013 valuations were adopted by the Board pursuant to the Experience Studies completed in September 2011, which reflected the experience period from July 1, 2005 through June 30, 2010, and were first used in the June 30, 2011 valuation. The actuarial assumptions for interest rate and mortality were updated for the June 30, 2012 valuation. Minor assumptions were updated for the June 30, 2013 valuation including the interest rate on member account balances and assumptions for Prosecuting Attorneys' Retirement Fund due to plan changes. The actuarial assumptions and methods are summarized in the Actuarial Assumptions and Methods section of each valuation report. We believe the actuarial assumptions and methods are reasonable for the purposes of the valuation reports and comply with the parameters set forth in Statements No. 25 and No. 27 of the Governmental Accounting Standards Board ("GASB"). Different assumptions and methods may be reasonable for other purposes. As such, the results presented in the valuation reports should only be relied upon for the intended purpose.

### Certification

We certify that the information presented herein is accurate and fairly portrays the actuarial position of each Plan administered by INPRS (other than the Teachers' Retirement Fund) as of June 30, 2013 based on the underlying census data, asset information and selected assumptions and methods.

This report contains the required accounting information to be included in the Comprehensive Annual Financial Report. This information has been prepared in accordance with our understanding of Governmental Accounting Standards No. 25 and No. 27 (as amended by No. 50). This report does not contain accounting information prepared in accordance with Governmental Accounting Standards No. 67 and No. 68, which will become effective for financial statements for fiscal years beginning after June 15, 2013 and June 15, 2014, respectively.

To the best of our knowledge this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with our understanding of the requirements of Indiana state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between the PwC practitioners involved in this engagement and INPRS that may impair our objectivity.

This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state, or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement letter between INPRS and PwC, and is intended solely for the use and benefits of INPRS and not for reliance by any other person.

Respectfully submitted,

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## SECTION I - EXECUTIVE SUMMARY

### **HIGHLIGHTS OF THE ACTUARY'S REPORT**

This report presents the results of the actuarial valuation of the Public Employees' Retirement Fund ("PERF") and has been prepared to present the current funded status of the Plan, contribution requirements for fiscal year 2015 (July 1, 2014 through June 30, 2015 for State members and January 1, 2015 through December 31, 2015 for Political Subdivision members), and certain financial statement disclosure information. The valuation was performed using census data for plan members as of June 30, 2013 provided by INPRS, asset information as of June 30, 2013 provided by INPRS, the actuarial assumptions and methods approved by the Board and summarized in Section V, and the plan provisions effective June 30, 2013 as summarized in Section VI.

#### **Contribution Rates**

The Annual Required Contribution Rate for the State for fiscal 2015 is 10.55%. However, the Board has approved a State employer contribution rate for fiscal 2015 of 11.2% starting July 1, 2014, the same as fiscal 2014. The actual dollar amount of employer cost will depend on the actual payroll during fiscal year 2015.

The aggregate Annual Required Contribution Rate for the Political Subdivisions for fiscal 2015 is also 10.55%. However, the Composite Rate is 11.2% for fiscal 2015, the same as fiscal 2014, starting January 1, 2015. Political Subdivisions currently paying a rate less than the Composite Rate in fiscal 2014 will be migrated toward the Composite Rate via a 1.5% increase (up to a maximum of 11.2%) in contribution rate for 2015. In addition, eight Political Subdivisions whose Annual Required Contribution Rate is greater than 11.2% will be added to the Composite Rate Group in 2015 regardless of their approved rate for 2014. The weighted average contribution rate for all Political Subdivisions is expected to be 11.19% in fiscal 2015. The actual dollar amount of employer cost will depend on the actual payroll during calendar year 2015.

Employees of the State and participating Political Subdivisions contribute 3% of their compensation to an Annuity Savings Account. Employers may "pick up" the employee contributions. The accumulated balance in each member's Annuity Savings Account can be withdrawn as a lump sum upon termination or can be converted to an annuity that is paid monthly in addition to the benefit that is funded by the employer contributions upon retirement.

#### **Funded Status**

The funded status of PERF is measured by the funded ratio, which is the ratio of the assets available for benefits to a benefit liability measure for PERF. While there are several such measures that could be appropriately used, the benefit liability measure that ties most closely to PERF's funding strategy is the Actuarial Accrued Liability ("AAL").

Using the Actuarial Value of Assets ("AVA"), an asset value that smoothes the market gains and losses over four (4) years, the PERF AAL funded ratio increased from 76.6% at June 30, 2012 to 80.2% at June 30, 2013. The increase is primarily due to the recognition of investment gains from prior years in the AVA development and the elimination of the liability associated with expected annuitization of ASA balances based on the Board's decision to modify ASA annuitizations starting October 1, 2014.

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## SECTION I - EXECUTIVE SUMMARY

### **HIGHLIGHTS OF THE ACTUARY'S REPORT (CONTINUED)**

#### **Investment Experience**

The assets of PERF are commingled with the assets of other funds administered by INPRS. The overall INPRS return on the commingled funds was 6.0% during fiscal 2013. Based on the value of assets allocated to PERF as of the prior valuation date and contribution and benefit payment activity during the year, the allocation of returns to PERF represent a return of approximately 5.4% on market value and 8.7% on actuarial value. The return on actuarial value is different due to the smoothing of returns greater or less than expected returns over four years.

#### **Cost-of-Living Adjustment**

Cost-of-living increases for retired members have historically been granted on an "ad hoc" basis. During fiscal 2014, no increases in monthly benefits will be provided to retired members, disabled members, or beneficiaries. Instead, a "13th check" was paid to each member (or survivor or beneficiary) in pay status during September 2013. The amount of the 13th check varied based on the years of creditable service the member had earned prior to retirement.

#### **Changes in Actuarial Assumptions**

There have been no changes in the actuarial assumptions since the June 30, 2012 valuation.

#### **Changes in Plan Provisions**

The Board has decided to modify the process of annuitizing ASA balances beginning October 1, 2014. It is expected that the current actuarial assumptions used internally by INPRS to annuitize ASA balances will be changed, or INPRS will require members to purchase an annuity from a third party insurer.

Effective March 1, 2013, the ASA-Only Plan was made available to newly hired State employees.

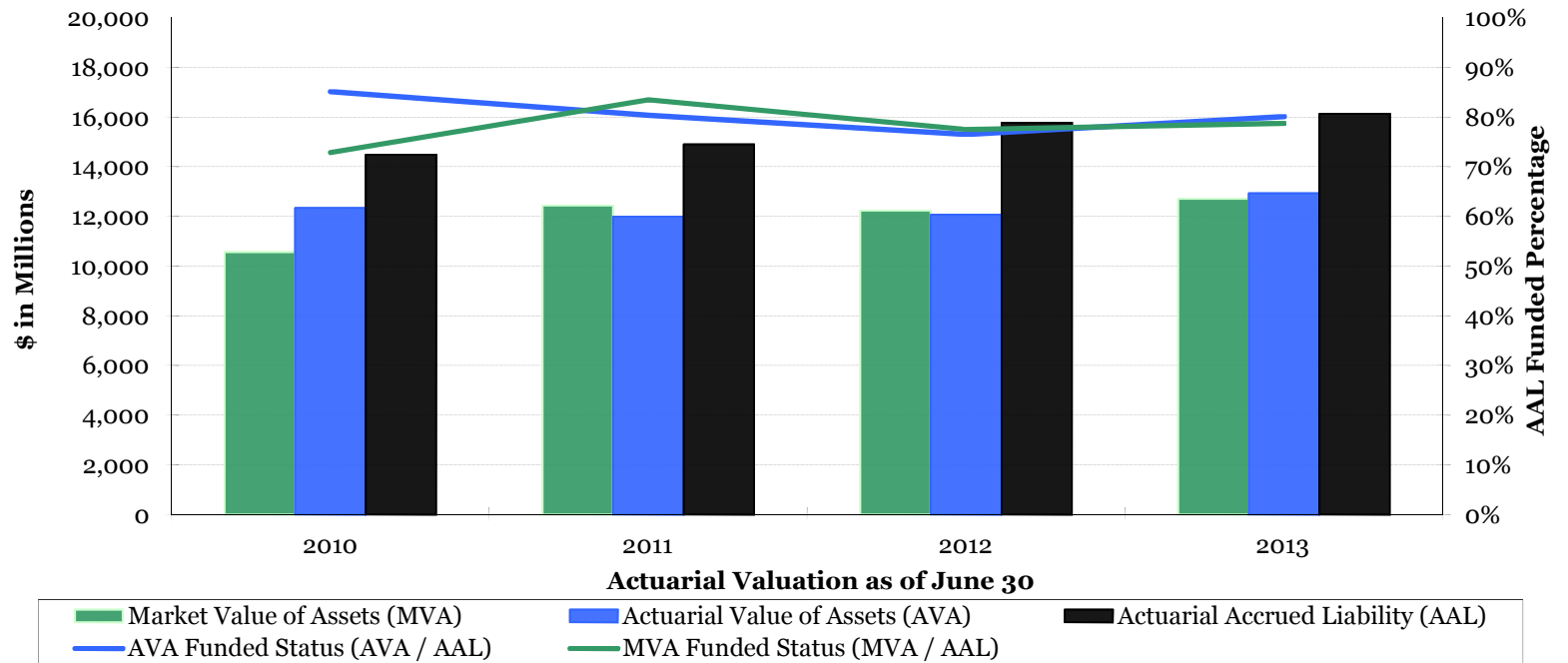
#### **Changes in Actuarial Methods**

There have been no changes in the actuarial methods since the June 30, 2012 valuation.

SECTION I - EXECUTIVE SUMMARY

HISTORICAL SUMMARY

**Total PERF – 4 Year History of Funded Status**



<b><u>Actuarial Valuation as of June 30:</u></b>	<b><u>2010</u></b>	<b><u>2011</u></b>	<b><u>2012</u></b>	<b><u>2013</u></b>
Actuarial Accrued Liability (AAL)	\$14,506.1	\$14,913.1	\$15,784.2	\$16,145.7
Actuarial Value of Assets (AVA)	12,357.2	12,000.6	12,088.2	12,947.3
Market Value of Assets (MVA)	10,581.3	12,461.4	12,243.8	12,720.6
Unfunded Liability (AAL - AVA)	2,148.9	2,912.5	3,696.0	3,198.4
AVA Funded Status (AVA / AAL)	85.2%	80.5%	76.6%	80.2%
MVA Funded Status (MVA / AAL)	72.9%	83.6%	77.6%	78.8%

SECTION I - EXECUTIVE SUMMARY

**HISTORICAL SUMMARY (CONTINUED)**

**Total PERF – Summary of Valuation Results <sup>1</sup>**

<b><u>Valuation Date</u></b>	<b><u>June 30, 2010</u></b>	<b><u>June 30, 2011</u></b>	<b><u>June 30, 2012</u></b>	<b><u>June 30, 2013</u></b>
Development of Annual Required Contribution Rate:				
1. Anticipated Payroll	\$ 4,896,012,580	\$ 4,818,773,680	\$ 4,904,052,414	\$ 4,766,909,874
2. Normal Cost (Beginning of Year)				
a. Amount	\$ 320,524,189	\$ 253,006,701	\$ 270,973,983	\$ 258,069,653
b. Percentage of Payroll	6.55%	5.25%	5.53%	5.41%
3. Unfunded Actuarial Accrued Liability Annual Amortizations				
a. Amount	\$ 163,318,289	\$ 222,668,943	\$ 278,065,556	\$ 244,924,393
b. Percentage of Payroll	3.34%	4.62%	5.67%	5.14%
4. Annual Required Contribution Rate: (2)(b) + (3)(b)	<b>9.89%</b>	<b>9.87%</b>	<b>11.20%</b>	<b>10.55%</b>
<b><u>Fiscal / Calendar Year</u></b>	<b><u>2012</u></b>	<b><u>2013</u></b>	<b><u>2014</u></b>	<b><u>2015</u></b>
Approved Funding Rate <sup>2</sup>	<b>8.74%</b>	<b>9.72%</b>	<b>11.08%</b>	<b>11.19%</b>

<sup>1</sup> The contribution rates shown were developed on a funding basis only and do not reflect accounting requirements.

<sup>2</sup> The Approved Funding Rate shown is the aggregate rate for the State and Political Subdivisions. The funding rates determined by the June 30, 2013 valuation become effective July 1, 2014 for the State rate and January 1, 2015 for the Political Subdivisions' rates. Approved Funding Rates before June 30, 2011 were based on smoothing rules that were repealed by the Board in December 2011.



SECTION I - EXECUTIVE SUMMARY

**HISTORICAL SUMMARY (CONTINUED)**

**State – Summary of Valuation Results <sup>1</sup>**

<b><u>Valuation Date</u></b>	<b><u>June 30, 2010</u></b>	<b><u>June 30, 2011</u></b>	<b><u>June 30, 2012</u></b>	<b><u>June 30, 2013</u></b>
Development of Annual Required Contribution Rate:				
1. Anticipated Payroll	\$ 1,730,479,696	\$ 1,641,685,770	\$ 1,648,023,022	\$ 1,647,453,669
2. Normal Cost (Beginning of Year)				
a. Amount	\$ 110,142,867	\$ 73,614,164	\$ 78,888,474	\$ 76,718,697
b. Percentage of Payroll	6.37%	4.49%	4.79%	4.65%
3. Unfunded Actuarial Accrued Liability Annual Amortizations				
a. Amount	\$ 66,147,093	\$ 84,263,994	\$ 105,132,459	\$ 97,160,297
b. Percentage of Payroll	3.82%	5.13%	6.38%	5.90%
4. Annual Required Contribution Rate:				
a. Percentage of Payroll: (2)(b) + (3)(b)	<b>10.19%</b>	<b>9.62%</b>	<b>11.17%</b>	<b>10.55%</b>
b. Effective Date	July 1, 2011	July 1, 2012	July 1, 2013	July 1, 2014
<b><u>Fiscal Year</u></b>	<b><u>2012</u></b>	<b><u>2013</u></b>	<b><u>2014</u></b>	<b><u>2015</u></b>
Approved Funding Rate <sup>2</sup>	<b>8.60%</b>	<b>9.70%</b>	<b>11.20%</b>	<b>11.20%</b>

**Political Subdivisions – Summary of Valuation Results <sup>1</sup>**

<b><u>Valuation Date</u></b>	<b><u>June 30, 2010</u></b>	<b><u>June 30, 2011</u></b>	<b><u>June 30, 2012</u></b>	<b><u>June 30, 2013</u></b>
Development of Annual Required Contribution Rate:				
1. Anticipated Payroll	\$ 3,165,532,884	\$ 3,177,087,910	\$ 3,256,029,392	\$ 3,119,456,205
2. Normal Cost (Beginning of Year)				
a. Amount	\$ 210,381,322	\$ 179,392,537	\$ 192,085,509	\$ 181,350,956
b. Percentage of Payroll	6.65%	5.64%	5.90%	5.81%
3. Unfunded Actuarial Accrued Liability Annual Amortizations				
a. Amount	\$ 97,171,196	\$ 138,404,949	\$ 172,933,097	\$ 147,764,096
b. Percentage of Payroll	3.07%	4.36%	5.31%	4.74%
4. Annual Required Contribution Rate:				
a. Percentage of Payroll: (2)(b) + (3)(b)	<b>9.72%</b>	<b>10.00%</b>	<b>11.21%</b>	<b>10.55%</b>
b. Effective Date	January 1, 2012	January 1, 2013	January 1, 2014	January 1, 2015
<b><u>Calendar Year</u></b>	<b><u>2012</u></b>	<b><u>2013</u></b>	<b><u>2014</u></b>	<b><u>2015</u></b>
Approved Funding Rate <sup>2,3</sup>	<b>8.82%</b>	<b>9.73%</b>	<b>11.03%</b>	<b>11.19%</b>

<sup>1</sup> The contribution rates shown were developed on a funding basis only and do not reflect accounting requirements.

<sup>2</sup> The funding rates determined by the June 30, 2013 valuation become effective July 1, 2014 for the State and January 1, 2015 for the Political Subdivisions. Approved Funding Rates before June 30, 2011 were based on smoothing rules that were repealed by the Board in December 2011.

<sup>3</sup> The Approved Funding Rate shown is the aggregate rate for Political Subdivisions.

SECTION I - EXECUTIVE SUMMARY

**HISTORICAL SUMMARY (CONTINUED)**

**Total PERF – Summary of Valuation Results (Continued)**

	<u>June 30, 2010</u>	<u>June 30, 2011</u>	<u>June 30, 2012</u>	<u>June 30, 2013</u>
Census Information				
Active				
Number				
State	48,220	45,912	45,156	42,742
Political Subdivisions	101,657	102,021	100,363	95,125
ASA Only	N/A	N/A	N/A	70
Total	<u>149,877</u>	<u>147,933</u>	<u>145,519</u>	<u>137,937</u>
Average Age	47.5	47.6	47.6	47.8
Average Years of Service	11.2	11.4	11.5	11.6
Covered Payroll of Actives				
State	1,730,479,696	1,641,685,770	1,648,023,022	1,647,453,669
Political Subdivisions	<u>3,165,532,884</u>	<u>3,177,087,910</u>	<u>3,256,029,392</u>	<u>3,119,456,205</u>
Total	\$ <u>4,896,012,580</u>	\$ <u>4,818,773,680</u>	\$ <u>4,904,052,414</u>	\$ <u>4,766,909,874</u>
Inactive - Vested				
Number	14,759	20,933	21,423	23,496
Average Age	53.9	52.7	52.7	53.1
Average Years of Service	15.1	11.8	11.9	12.0
Inactive - Non-Vested				
Number	88,234	71,806	47,651	51,065
Retiree/Beneficiary/Disabled				
Number	67,166	70,380	72,992	75,950
Average Age	72.6	72.5	72.5	72.5
Annual Benefits Payable				
Pension	422,825,882	455,230,274	483,551,145	515,868,841
ASA Annuities	<u>75,373,430</u>	<u>84,516,826</u>	<u>93,126,384</u>	<u>102,108,467</u>
Total	\$ <u>498,199,312</u>	\$ <u>539,747,100</u>	\$ <u>576,677,529</u>	\$ <u>617,977,308</u>

SECTION I - EXECUTIVE SUMMARY

HISTORICAL SUMMARY (CONTINUED)

**Total PERF – Summary of Valuation Results (Continued)**

	<u>June 30, 2010</u>	<u>June 30, 2011</u>	<u>June 30, 2012</u>	<u>June 30, 2013</u>
<b>Actuarial Accrued Liability (AAL)</b>				
ASA Account Balance	\$ 2,780,570,388	\$ 2,805,023,137	\$ 2,749,448,762	\$ 2,796,102,616
ASA Annuities - Retiree/Beneficiary/Disabled	710,683,223	801,369,029	908,664,881	1,005,166,415
Pension - Retiree/Beneficiary/Disabled	4,220,908,907	4,569,417,231	4,987,114,328	5,362,652,879
Pension - Active and Inactive				
State	2,678,030,588	2,538,861,413	2,660,671,538	2,635,640,409
Political Subdivisions	4,115,859,095	4,198,476,483	4,478,340,402	4,346,118,470
Total	<u>\$ 6,793,889,683</u>	<u>\$ 6,737,337,896</u>	<u>\$ 7,139,011,940</u>	<u>\$ 6,981,758,879</u>
Total	\$ 14,506,052,201	\$ 14,913,147,293	\$ 15,784,239,911	\$ 16,145,680,789
<b>Actuarial Value of Assets (AVA)</b>				
ASA Account Balance	\$ 2,780,570,388	\$ 2,805,023,137	\$ 2,749,448,762	\$ 2,796,102,616
ASA Annuities - Retiree/Beneficiary/Disabled	710,683,223	801,369,029	908,664,881	1,005,166,415
Pension - Retiree/Beneficiary/Disabled	4,220,908,907	4,569,417,231	4,987,114,328	5,362,652,879
Pension - Active and Inactive	4,645,036,496	3,824,776,913	3,442,996,687	3,783,361,323
Total	<u>\$ 12,357,199,014</u>	<u>\$ 12,000,586,310</u>	<u>\$ 12,088,224,658</u>	<u>\$ 12,947,283,233</u>
<b>Market Value of Assets (MVA)</b>				
ASA Account Balance	\$ 2,780,570,388	\$ 2,805,023,137	\$ 2,749,448,762	\$ 2,796,102,616
ASA Annuities - Retiree/Beneficiary/Disabled	710,683,223	801,369,029	908,664,881	1,005,166,415
Pension - Retiree/Beneficiary/Disabled	4,220,908,907	4,569,417,231	4,987,114,328	5,362,652,879
Pension - Active and Inactive	2,869,156,895	4,285,546,512	3,598,525,143	3,556,679,808
Total	<u>\$ 10,581,319,413</u>	<u>\$ 12,461,355,909</u>	<u>\$ 12,243,753,114</u>	<u>\$ 12,720,601,718</u>
<b>Unfunded Actuarial Accrued Liability: AAL - AVA</b>				
ASA Account Balance	\$ -	\$ -	\$ -	\$ -
ASA Annuities - Retiree/Beneficiary/Disabled	-	-	-	-
Pension - Retiree/Beneficiary/Disabled	-	-	-	-
Pension - Active and Inactive	2,148,853,187	2,912,560,983	3,696,015,253	3,198,397,556
Total	<u>\$ 2,148,853,187</u>	<u>\$ 2,912,560,983</u>	<u>\$ 3,696,015,253</u>	<u>\$ 3,198,397,556</u>
<b>Funded Percentage: AVA / AAL</b>				
ASA Account Balance	100.0%	100.0%	100.0%	100.0%
ASA Annuities - Retiree/Beneficiary/Disabled	100.0%	100.0%	100.0%	100.0%
Pension - Retiree/Beneficiary/Disabled	100.0%	100.0%	100.0%	100.0%
Pension - Active and Inactive	68.4%	56.8%	48.2%	54.2%
Total	<u>85.2%</u>	<u>80.5%</u>	<u>76.6%</u>	<u>80.2%</u>
<b>Summary of Assumptions</b>				
Valuation Interest Rate	7.0%	7.0%	6.75%	6.75%
Salary Scale	4.0%	3.25% - 4.5%	3.25% - 4.5%	3.25% - 4.5%
Cost-of-Living Assumption	1.0%	1.0%	1.0%	1.0%

SECTION I - EXECUTIVE SUMMARY

HISTORICAL SUMMARY (CONTINUED)

State – Summary of Valuation Results (Continued) <sup>1</sup>

	<u>June 30, 2010</u>	<u>June 30, 2011</u>	<u>June 30, 2012</u>	<u>June 30, 2013</u>
<b>Actuarial Accrued Liability (AAL)</b>				
ASA Account Balance	\$ 926,856,796	\$ 935,007,712	\$ 916,482,921	\$ 932,034,205
ASA Annuities - Retiree/Beneficiary/Disabled	236,894,408	267,123,010	302,888,294	335,055,472
Pension - Retiree/Beneficiary/Disabled	1,406,969,635	1,523,139,077	1,662,371,442	1,787,550,960
Pension - Active and Inactive	<u>2,678,030,588</u>	<u>2,538,861,413</u>	<u>2,660,671,538</u>	<u>2,635,640,409</u>
Total	\$ 5,248,751,427	\$ 5,264,131,212	\$ 5,542,414,195	\$ 5,690,281,046
<b>Actuarial Value of Assets (AVA)</b>				
ASA Account Balance	\$ 926,856,796	\$ 935,007,712	\$ 916,482,921	\$ 932,034,205
ASA Annuities - Retiree/Beneficiary/Disabled	236,894,408	267,123,010	302,888,294	335,055,472
Pension - Retiree/Beneficiary/Disabled	1,406,969,635	1,523,139,077	1,662,371,442	1,787,550,960
Pension - Active and Inactive	<u>1,803,664,021</u>	<u>1,433,516,270</u>	<u>1,259,781,511</u>	<u>1,360,730,908</u>
Total	\$ 4,374,384,859	\$ 4,158,786,069	\$ 4,141,524,168	\$ 4,415,371,545
<b>Market Value of Assets (MVA)</b>				
ASA Account Balance	\$ 926,856,796	\$ 935,007,712	\$ 916,482,921	\$ 932,034,205
ASA Annuities - Retiree/Beneficiary/Disabled	236,894,408	267,123,010	302,888,294	335,055,472
Pension - Retiree/Beneficiary/Disabled	1,406,969,635	1,523,139,077	1,662,371,442	1,787,550,960
Pension - Active and Inactive	<u>1,114,091,367</u>	<u>1,606,211,496</u>	<u>1,316,688,878</u>	<u>1,279,202,204</u>
Total	\$ 3,684,812,206	\$ 4,331,481,295	\$ 4,198,431,535	\$ 4,333,842,841
<b>Unfunded Actuarial Accrued Liability: AAL - AVA</b>				
ASA Account Balance	\$ -	\$ -	\$ -	\$ -
ASA Annuities - Retiree/Beneficiary/Disabled	-	-	-	-
Pension - Retiree/Beneficiary/Disabled	-	-	-	-
Pension - Active and Inactive	<u>874,366,568</u>	<u>1,105,345,143</u>	<u>1,400,890,027</u>	<u>1,274,909,501</u>
Total	\$ 874,366,568	\$ 1,105,345,143	\$ 1,400,890,027	\$ 1,274,909,501
<b>Funded Percentage: AVA / AAL</b>				
ASA Account Balance	100.0%	100.0%	100.0%	100.0%
ASA Annuities - Retiree/Beneficiary/Disabled	100.0%	100.0%	100.0%	100.0%
Pension - Retiree/Beneficiary/Disabled	100.0%	100.0%	100.0%	100.0%
Pension - Active and Inactive	<u>67.4%</u>	<u>56.5%</u>	<u>47.3%</u>	<u>51.6%</u>
Total	83.3%	79.0%	74.7%	77.6%
<b>Summary of Assumptions</b>				
Valuation Interest Rate	7.0%	7.0%	6.75%	6.75%
Salary Scale	4.0%	3.25% - 4.5%	3.25% - 4.5%	3.25% - 4.5%
Cost-of-Living Assumption	1.0%	1.0%	1.0%	1.0%

<sup>1</sup> As requested by INPRS, one-third (1/3) of the retired / disabled / beneficiary member liability, ASA account balances, and ASA annuities has been allocated to the State and the remaining two-thirds (2/3) to the Political Subdivisions.

SECTION I - EXECUTIVE SUMMARY

HISTORICAL SUMMARY (CONTINUED)

**Political Subdivisions – Summary of Valuation Results (Continued) <sup>1</sup>**

	<u>June 30, 2010</u>	<u>June 30, 2011</u>	<u>June 30, 2012</u>	<u>June 30, 2013</u>
<b>Actuarial Accrued Liability (AAL)</b>				
ASA Account Balance	\$ 1,853,713,592	\$ 1,870,015,425	\$ 1,832,965,841	\$ 1,864,068,411
ASA Annuities - Retiree/Beneficiary/Disabled	473,788,815	534,246,019	605,776,587	670,110,943
Pension - Retiree/Beneficiary/Disabled	2,813,939,272	3,046,278,154	3,324,742,886	3,575,101,919
Pension - Active and Inactive	4,115,859,095	4,198,476,483	4,478,340,402	4,346,118,470
Total	<u>\$ 9,257,300,774</u>	<u>\$ 9,649,016,081</u>	<u>\$ 10,241,825,716</u>	<u>\$ 10,455,399,743</u>
<b>Actuarial Value of Assets (AVA)</b>				
ASA Account Balance	\$ 1,853,713,592	\$ 1,870,015,425	\$ 1,832,965,841	\$ 1,864,068,411
ASA Annuities - Retiree/Beneficiary/Disabled	473,788,815	534,246,019	605,776,587	670,110,943
Pension - Retiree/Beneficiary/Disabled	2,813,939,272	3,046,278,154	3,324,742,886	3,575,101,919
Pension - Active and Inactive	2,841,372,476	2,391,260,643	2,183,215,176	2,422,630,415
Total	<u>\$ 7,982,814,155</u>	<u>\$ 7,841,800,241</u>	<u>\$ 7,946,700,490</u>	<u>\$ 8,531,911,688</u>
<b>Market Value of Assets (MVA)</b>				
ASA Account Balance	\$ 1,853,713,592	\$ 1,870,015,425	\$ 1,832,965,841	\$ 1,864,068,411
ASA Annuities - Retiree/Beneficiary/Disabled	473,788,815	534,246,019	605,776,587	670,110,943
Pension - Retiree/Beneficiary/Disabled	2,813,939,272	3,046,278,154	3,324,742,886	3,575,101,919
Pension - Active and Inactive	1,755,065,528	2,679,335,016	2,281,836,265	2,277,477,604
Total	<u>\$ 6,896,507,207</u>	<u>\$ 8,129,874,614</u>	<u>\$ 8,045,321,579</u>	<u>\$ 8,386,758,877</u>
<b>Unfunded Actuarial Accrued Liability: AAL - AVA</b>				
ASA Account Balance	\$ -	\$ -	\$ -	\$ -
ASA Annuities - Retiree/Beneficiary/Disabled	-	-	-	-
Pension - Retiree/Beneficiary/Disabled	-	-	-	-
Pension - Active and Inactive	1,274,486,619	1,807,215,840	2,295,125,226	1,923,488,055
Total	<u>\$ 1,274,486,619</u>	<u>\$ 1,807,215,840</u>	<u>\$ 2,295,125,226</u>	<u>\$ 1,923,488,055</u>
<b>Funded Percentage: AVA / AAL</b>				
ASA Account Balance	100.0%	100.0%	100.0%	100.0%
ASA Annuities - Retiree/Beneficiary/Disabled	100.0%	100.0%	100.0%	100.0%
Pension - Retiree/Beneficiary/Disabled	100.0%	100.0%	100.0%	100.0%
Pension - Active and Inactive	69.0%	57.0%	48.8%	55.7%
Total	<u>86.2%</u>	<u>81.3%</u>	<u>77.6%</u>	<u>81.6%</u>
<b>Summary of Assumptions</b>				
Valuation Interest Rate	7.0%	7.0%	6.75%	6.75%
Salary Scale	4.0%	3.25% - 4.5%	3.25% - 4.5%	3.25% - 4.5%
Cost-of-Living Assumption	1.0%	1.0%	1.0%	1.0%

<sup>1</sup> As requested by INPRS, one-third (1/3) of the retired / disabled / beneficiary member liability, ASA account balances, and ASA annuities has been allocated to the State and the remaining two-thirds (2/3) to the Political Subdivisions.

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## SECTION II - FUNDING

### **FUNDING**

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## SECTION II - FUNDING

### A. Development of Funded Status

	<b>June 30, 2012</b>	<b>June 30, 2013</b>
1. Actuarial Accrued Liability		
a. Annuity Savings Account Balances <sup>1</sup>	\$ 2,749,448,762	\$ 2,796,102,616
b. ASA Annuities	908,664,881	1,005,166,415
c. Retirees, Beneficiaries, and Disableds	4,987,114,328	5,362,652,879
d. Actives and Inactives <sup>2</sup>	7,139,011,940	6,981,758,879
e. Total: (1)(a) + (1)(b) + (1)(c) + (1)(d)	\$ 15,784,239,911	\$ 16,145,680,789
2. Actuarial Value of Assets <sup>3</sup>		
a. Annuity Savings Account Balances	\$ 2,749,448,762	\$ 2,796,102,616
b. ASA Annuities	908,664,881	1,005,166,415
c. Retirees, Beneficiaries, and Disableds	4,987,114,328	5,362,652,879
d. Actives and Inactives	3,442,996,687	3,783,361,323
e. Total: (2)(a) + (2)(b) + (2)(c) + (2)(d)	\$ 12,088,224,658	\$ 12,947,283,233
3. Unfunded Actuarial Accrued Liability <sup>3</sup>		
a. Annuity Savings Account Balances: (1)(a) - (2)(a)	\$ -	\$ -
b. ASA Annuities: (1)(b) - (2)(b)	-	-
c. Retirees, Beneficiaries, and Disableds: (1)(c) - (2)(c)	-	-
d. Actives and Inactives: (1)(d) - (2)(d)	3,696,015,253	3,198,397,556
e. Total: (1)(e) - (2)(e)	\$ 3,696,015,253	\$ 3,198,397,556
4. Funded Status <sup>3</sup>		
a. Annuity Savings Account Balances: (2)(a) / (1)(a)	100.0%	100.0%
b. ASA Annuities: (2)(b) / (1)(b)	100.0%	100.0%
c. Retirees, Beneficiaries, and Disableds: (2)(c) / (1)(c)	100.0%	100.0%
d. Actives and Inactives: (2)(d) / (1)(d)	48.2%	54.2%
e. Total: (2)(e) / (1)(e)	76.6%	80.2%

<sup>1</sup> At June 30, 2013, includes a non-vested balance of \$20,561 for ASA-only members.

<sup>2</sup> At June 30, 2012, includes liability in excess of ASA balances associated with the expected annuitization of Annuity Savings Account balances due to the favorable assumptions used to convert balances to annuities. The liability was eliminated for the June 30, 2013 valuation due to the Board's decision to modify ASA annuitization starting October 1, 2014.

<sup>3</sup> In determining the funded percentage, the assets are allocated first to member contribution balances, then to ASA Annuities, then to the retiree/beneficiary/disabled liability, and then to the active/inactive liability.

SECTION II - FUNDING

**B. Unfunded Actuarial Accrued Liability Reconciliation**

	<u>June 30, 2012</u>	<u>June 30, 2013</u>
1. Unfunded Actuarial Accrued Liability, Prior Year	\$ 2,912,560,983	\$ 3,696,015,253
2. Unfunded Actuarial Accrued Liability (Gain) / Loss		
a. Actuarial Value of Assets Experience	\$ 486,424,398	\$ (285,827,765)
b. Actuarial Accrued Liability Experience	(87,830,844)	33,200,061
c. Additional Liability Due to Cost-of-living Adjustments	(14,135,011) <sup>1</sup>	(30,150,409) <sup>3</sup>
d. Additional Liability Due to Changes in Actuarial Assumptions	433,372,227 <sup>2</sup>	-
e. Additional Liability Due to Changes in Plan Provisions	-	(167,485,633) <sup>4</sup>
f. Total New Amortization Bases: (2)(a) + (2)(b) + (2)(c) + 2(d) + (2)(e)	<u>\$ 817,830,770</u>	<u>\$ (450,263,746)</u>
g. Reduction in Existing Bases Due to Prior Year Amortization, Net of Interest	<u>(34,376,500)</u>	<u>(47,353,951)</u>
h. Change in Unfunded Actuarial Accrued Liability: (2)(f) + (2)(g)	<u>\$ 783,454,270</u>	<u>\$ (497,617,697)</u>
3. Unfunded Actuarial Accrued Liability, Current Year: (1) + (2)(h)	\$ 3,696,015,253	\$ 3,198,397,556

<sup>1</sup> Retired members were provided a 13th check by October 1, 2012, rather than a 1.0% COLA on January 1, 2013.

<sup>2</sup> Assumption changes include the change in discount rate from 7.0% to 6.75%, change in the interest rate on member ASA balances from 7.0% to 3.0%, and change in mortality table from the 2008 IRS Static Mortality projected five (5) years with Scale AA to the 2013 IRS Static Mortality projected five (5) years with Scale AA.

<sup>3</sup> Retired members were provided a 13th check by October 1, 2013, rather than a 1.0% COLA on January 1, 2014.

<sup>4</sup> The liability associated with expected annuitization of ASA balances was eliminated as of June 30, 2013 due to the Board's decision to modify ASA annuitizations starting October 1, 2014.



SECTION II - FUNDING

**C. Actuarial Accrued Liability Reconciliation**

1. June 30, 2012 Actuarial Accrued Liability	\$ 15,784,239,911	
2. Normal Cost	270,973,983	
3. Actual Benefit Payments	801,764,510	
4. Interest of 6.75% on (1) + (2) - (3)/2	<u>1,056,667,386</u>	
5. Expected June 30, 2013 Actuarial Accrued Liability: (1) + (2) - (3) + (4)	\$ 16,310,116,770	
	<u>Dollar Change</u>	<u>Percent Change</u>
	<u>in Liability</u>	<u>in Liability</u>
6. (Gain)/Loss Components		
a. Census	\$ 33,200,061	0.2%
b. 13th Check vs. COLA <sup>1</sup>	(30,150,409)	(0.2%)
c. Plan Provisions <sup>2</sup>	<u>(167,485,633)</u>	<u>(1.0%)</u>
d. Total: (6)(a) + (6)(b) + (6)(c)	\$ (164,435,981)	(1.0%)
7. Actual June 30, 2013 Actuarial Accrued Liability: (5) + (6)(c)	<b>\$ 16,145,680,789</b>	

<sup>1</sup> Retired members were provided a 13th check by October 1, 2013, rather than a 1.0% COLA on January 1, 2014.

<sup>2</sup> The liability associated with expected annuitization of ASA balances was eliminated as of June 30, 2013 due to the Board's decision to modify ASA annuitizations starting October 1, 2014.

SECTION II - FUNDING

**D. Reconciliation of Market Value of Assets**

	<b>June 30, 2012</b>	<b>June 30, 2013</b>
1. Market Value of Assets, Prior June 30	\$ 12,461,355,909	\$ 12,243,753,114
2. Receipts		
a. Employer Contributions	\$ 397,842,387	\$ 455,658,474
b. Member Contributions	158,695,936	156,407,612
c. Investment Income and Dividends Net of Fees	(7,433,198)	689,021,435
d. Security Lending Income Net of Fees	3,481,283	2,312,844
e. Transfers In	3,341,006	4,363,039
f. Miscellaneous Income	8,009	30,986
g. Total Receipts: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f)	\$ 555,935,423	\$ 1,307,794,390
3. Disbursements		
a. Benefits Paid During the Year	\$ 669,181,018	\$ 722,585,273
b. Refund of Contributions and Interest	69,880,200	68,774,616
c. Administrative and Project Expenses	24,793,064	29,181,276
d. Transfers Out	9,683,936	10,404,621
e. Miscellaneous Disbursements	-	-
f. Total Disbursements: (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e)	\$ 773,538,218	\$ 830,945,786
4. Market Value of Assets, Current June 30: (1) + (2)(g) - (3)(f)	<b>\$ 12,243,753,114</b>	<b>\$ 12,720,601,718</b>
5. Market Value of Assets Approximate Annual Rate of Return <sup>1</sup>	(0.2%)	5.4%

<sup>1</sup> Assumes cash flows occur at mid-year.

SECTION II - FUNDING

**E. Reconciliation of Actuarial Value of Assets**

1.	Market Value of Assets, June 30, 2012	\$	12,243,753,114
2.	Market Value of Assets, June 30, 2013	\$	12,720,601,718
3.	Expected Earnings/Expenses		
a.	Expected Investment Earnings at 6.75% on June 30, 2012 Market Value	\$	826,453,335
b.	Receipts with Expected Investment Earnings at 6.75% <sup>1</sup>	\$	637,265,640
c.	Disbursements with Expected Investment Earnings at 6.75% <sup>1</sup>	\$	828,824,062
4.	Expected Assets, June 30, 2013: (1) + (3)(a) + (3)(b) - (3)(c)	\$	12,878,648,027
5.	2012-2013 Gain/(Loss): (2) - (4)		(158,046,309)
6.	Smoothing of Gain/(Loss)		
	<u>Year</u>	<u>Gain/(Loss)</u>	<u>% Unrecognized</u>
a.	2012-2013	\$ (158,046,309)	75%
b.	2011-2012	\$ (894,429,870)	50%
c.	2010-2011	\$ 1,356,272,606	25%
7.	Preliminary Actuarial Value of Assets, June 30, 2013: (2) - (6)(a) - (6)(b) - (6)(c)	\$	12,947,283,233
8.	Corridor		
a.	120% of Market Value: 1.2 x (2)		15,264,722,062
b.	80% of Market Value: 0.8 x (2)		10,176,481,374
9.	Actuarial Value of Assets, June 30, 2013: (7), but not greater than (8)(a) or less than (8)(b)	\$	<b>12,947,283,233</b>
10.	Actuarial Value of Assets as a Percent of Market Value: (9) / (2)		101.8%
11.	Actuarial Value of Assets Approximate Annual Rate of Investment Return <sup>1</sup>		8.7%

<sup>1</sup> Assumes cash flows occur at mid-year.

SECTION II - FUNDING

**F. Allocation of Assets**

	<b>June 30, 2012</b>	<b>June 30, 2013</b>
1. Total Assets Available for Benefit		
a. Market Value of Assets	\$ 12,243,753,114	\$ 12,720,601,718
b. Actuarial Value of Assets	12,088,224,658	12,947,283,233
2. Annuity Savings Accounts	2,749,448,762	2,796,102,616
3. Assets for Retirees, Beneficiaries, and Disabled Members, including ASA Annuities		
a. Retirees, Beneficiaries, and Disabled	\$ 4,987,114,328	\$ 5,362,652,879
b. ASA Annuities	908,664,881	1,005,166,415
c. Total	\$ 5,895,779,209	\$ 6,367,819,294
4. Total Non-Retired Assets		
a. Market Value of Assets: (1)(a) - (2) - (3)(c)	\$ 3,598,525,143	\$ 3,556,679,808
b. Actuarial Value of Assets: (1)(b) - (2) - (3)(c)	\$ 3,442,996,687	\$ 3,783,361,323
5. Total Ledger Assets	\$ 4,102,924,848	\$ 4,111,448,769
a. State Amount	\$ 1,501,247,122	\$ 1,478,731,461
b. State Percent	36.6%	36.0%
c. Political Subdivisions Amount	\$ 2,601,677,726	\$ 2,632,717,308
d. Political Subdivisions Percent	63.4%	64.0%
6. State Allocation		
a. Market Value of Assets: (4)(a) x (5)(b)	\$ 1,316,688,878	\$ 1,279,202,204
b. Actuarial Value of Assets: (4)(b) x (5)(b)	\$ 1,259,781,511	\$ 1,360,730,908
7. Political Subdivisions Allocation		
a. Market Value of Assets: (4)(a) x (5)(d)	\$ 2,281,836,265	\$ 2,277,477,604
b. Actuarial Value of Assets: (4)(b) x (5)(d)	\$ 2,183,215,176	\$ 2,422,630,415

SECTION II - FUNDING

**G. State – Contribution Rate**

	<b>June 30, 2012</b>	<b>June 30, 2013</b>
<b>Development of Annual Required Contribution Rate:</b>		
1. Anticipated Payroll	\$ 1,648,023,022	\$ 1,647,453,669
2. Normal Cost (Beginning of Year)		
a. Amount	\$ 78,888,474	\$ 76,718,697
b. Percentage of Payroll	4.79%	4.65%
3. Unfunded Actuarial Accrued Liability (UAAL) Annual Amortizations		
a. Amount	\$ 105,132,459	\$ 97,160,297
b. Percentage of Payroll	6.38%	5.90%
4. Annual Required Contribution Rate:		
a. Percentage of Payroll: (2)(b) + (3)(b)	<b>11.17%</b>	<b>10.55%</b>
b. Effective Date	July 1, 2013	July 1, 2014
<b>Approved Funding Rate:</b>	<b>11.20%</b>	<b>11.20%</b>
<b>Expected Percentage of Annual Required Contribution Contributed:</b>		
6. Fiscal Year Beginning	July 1, 2013	July 1, 2014
7. Annual Required Contribution Rate:	11.17%	10.55%
8. Approved Funding Rate:	11.20%	11.20%
9. Expected Percentage of Annual Required Contribution Rate Contributed: (8) / (7)	100.27%	106.16%

SECTION II - FUNDING

**H. Political Subdivisions – Aggregate Contribution Rate**

	<b>June 30, 2012</b>	<b>June 30, 2013</b>
<b>Development of Annual Required Contribution:</b>		
1. Anticipated Payroll	\$ 3,256,029,392	\$ 3,119,456,205
2. Normal Cost (Beginning of Year)		
a. Amount	\$ 192,085,509	\$ 181,350,956
b. Percentage of Payroll	5.90%	5.81%
3. Unfunded Actuarial Accrued Liability (UAAL) Annual Amortizations		
a. Amount	\$ 172,933,097	\$ 147,764,096
b. Percentage of Payroll	5.31%	4.74%
4. Aggregate Annual Required Contribution Rate:		
a. Percentage of Payroll: (2)(b) + (3)(b)	<b>11.21%</b>	<b>10.55%</b>
b. Effective Date	January 1, 2014	January 1, 2015
<b>Approved Funding Rate:</b>	<b>11.03%</b> <sup>1</sup>	<b>11.19%</b> <sup>1</sup>
<b>Expected Percentage of Annual Required Contribution Rate Contributed:</b>		
6. Fiscal Year Beginning	July 1, 2013	July 1, 2014
7. Annual Required Contribution Rates for:		
a. July 1 - December 31	10.00%	11.21%
b. January 1 - June 30	11.21%	10.55%
8. Approved Funding Rates for:		
a. July 1 - December 31	9.73%	11.03%
b. January 1 - June 30	11.03%	11.19%
9. Expected Percentage of Annual Required Contribution Rate Contributed:	97.88%	102.11%
$\{[(8)(a) + (8)(b)] / 2\} / \{[(7)(a) + (7)(b)] / 2\}$		

<sup>1</sup> Weighted average approved rate for all Political Subdivisions. The approved composite rate is 11.20% for both years, but a lower rate was approved for some Political Subdivisions that have yet to be phased into the composite rate group.

SECTION II - FUNDING

**Unfunded Actuarial Accrued Liability Amortization Schedule**

**I. State**

	Date Base Established	Reason	Remaining Unfunded	Remaining Period	Amortization Amount
1.	6/30/2008	Fresh Start	\$ 41,675,547	25	\$ 3,274,972
2.	6/30/2009	Actuarial Experience	264,511,539	26	20,471,745
3.	6/30/2010	Actuarial Experience and Changes in Actuarial Assumptions	536,955,678	27	40,977,084
4.	6/30/2011	Actuarial Experience and Changes in Actuarial Assumptions	235,159,154	28	17,714,135
5.	6/30/2012	Actuarial Experience and Changes in Actuarial Assumptions	304,919,286	29	22,694,524
6.	6/30/2013	Actuarial Experience and Changes in Plan Provisions	<u>(108,311,703)</u>	30	<u>(7,972,163)</u>
	Total		\$ 1,274,909,501		\$ 97,160,297

**J. Political Subdivisions**

	Date Base Established	Reason	Remaining Unfunded	Remaining Period	Amortization Amount
1.	6/30/2006	Fresh Start	\$ 211,220,452	23	\$ 17,180,318
2.	6/30/2007	Actuarial Experience and Changes in Actuarial Assumptions	4,241,059	24	338,826
3.	6/30/2008	Actuarial Experience	44,041,163	25	3,460,869
4.	6/30/2009	Actuarial Experience	323,934,454	26	25,070,753
5.	6/30/2010	Actuarial Experience and Changes in Actuarial Assumptions	642,928,460	27	49,064,261
6.	6/30/2011	Actuarial Experience and Changes in Actuarial Assumptions	535,218,173	28	40,317,066
7.	6/30/2012	Actuarial Experience and Changes in Actuarial Assumptions	503,856,337	29	37,501,004
8.	6/30/2013	Actuarial Experience and Changes in Plan Provisions	<u>(341,952,043)</u>	30	<u>(25,169,001)</u>
	Total		\$ 1,923,488,055		\$ 147,764,096

SECTION II - FUNDING

**K. History of Employer Contribution Rates**<sup>1, 2</sup>

1.	2.		3.		4.
<u>Valuation Date</u>	<u>State</u>		<u>Political Subdivisions (Aggregate)</u>		<u>Weighted Average</u>
<u>Valuation Date</u>	<u>Effective Date</u>	<u>Contribution Rate</u>	<u>Effective Date</u>	<u>Contribution Rate</u>	<u>Weighted Average</u>
June 30, 2001	July 1, 2002	5.2%	January 1, 2003	5.0%	5.1%
June 30, 2002	July 1, 2003	5.6%	January 1, 2004	6.2%	5.9%
June 30, 2003	July 1, 2004	3.8%	January 1, 2005	4.7%	4.4%
June 30, 2004	July 1, 2005	4.5%	January 1, 2006	5.3%	5.0%
June 30, 2005	July 1, 2006	5.5%	January 1, 2007	6.3%	6.0%
June 30, 2006	July 1, 2007	6.3%	January 1, 2008	6.9%	6.7%
June 30, 2007	July 1, 2008	6.3%	January 1, 2009	6.9%	6.6%
June 30, 2008	July 1, 2009	6.5%	January 1, 2010	7.1%	6.8%
June 30, 2009	July 1, 2010	7.0%	January 1, 2011	7.9%	7.6%
June 30, 2010	July 1, 2011	8.6%	January 1, 2012	8.8%	8.7%
June 30, 2011	July 1, 2012	9.7%	January 1, 2013	9.7%	9.7%
June 30, 2012	July 1, 2013	11.2%	January 1, 2014	11.0%	11.1%
June 30, 2013	July 1, 2014	11.2%	January 1, 2015	11.2%	11.2%

<sup>1</sup> Valuation results prior to June 30, 2010 were calculated by the prior actuary.

<sup>2</sup> Prior to the June 30, 2011 valuation date, rates shown reflect application of the contribution rate smoothing rules.



SECTION II - FUNDING

**L. Approximate Annual Rate of Return for Year Ending June 30, 2013**<sup>1</sup>

	<u>Market Value of Assets</u>	<u>Actuarial Value of Assets</u>
1. Balance, beginning of year	\$ 12,243,753,114	\$ 12,088,224,658
2. Balance, end of year	12,720,601,718	12,947,283,233
3. Total increase: (2) - (1)	476,848,604	859,058,575
4. Contributions and Transfers In	616,460,111	616,460,111
5. Benefit payments and Transfers Out	801,764,510	801,764,510
6. Net additions: (4) - (5)	(185,304,399)	(185,304,399)
7. Net investment increase: (3) - (6)	662,153,003	1,044,362,974
8. Average assets: [(1) + (2) - (7)] / 2	12,151,100,915	11,995,572,459
9. Approximate rate of return: (7) / (8) <sup>1</sup>	5.4%	8.7%

**M. Historical Investment Experience**

1. <u>Year Ending June 30</u>	2. <u>Actual Rate of Investment Return</u>		3.	4. <u>Actuarial Assumed Interest Rate</u>
	<u>Market Basis</u> <sup>2</sup>	<u>Actuarial Basis</u> <sup>1</sup>		
2004	16.3%	6.3%		7.25%
2005	9.8%	7.0%		7.25%
2006	10.7%	7.9%		7.25%
2007	18.2%	10.4%		7.25%
2008	(7.6%)	5.3%		7.25%
2009	(20.6%)	(0.9%)		7.25%
2010	13.9%	(0.7%)		7.25%
2011	20.1%	(1.2%)		7.0%
2012	0.7%	2.3%		7.0%
2013	6.0%	8.7%		6.75%

<sup>1</sup> Based on individual fund experience. Net of expenses and assuming cash flows occur at mid-year.

<sup>2</sup> INPRS actual rate of return net of fees (2012-2013), 2004-2011 PERF CRIF rate of return reported as Gross of fees.

SECTION II - FUNDING

**N. Interest Rate Sensitivity**

The investment return assumption (discount rate), as required by GASB, should be based on an estimated long-term investment yield for the plan, with consideration given to the nature and mix of current and expected plan investments. Management and the Board continually monitor the investment rate of return assumption and the Board formally reviews the assumption and makes changes as appropriate. The Board did not change the assumption for the June 30, 2013 valuation from 6.75%.

To illustrate the importance of the investment rate of return, which is used to discount the actuarial liabilities of the Plan, the funded status and ARC Rate (for the fiscal year beginning July 1, 2014 for State and January 1, 2015 for Political Subdivisions) are shown below at 6.75% (the current assumption), 6.0% (a three-fourths of a percent decrease), 6.5% (a one-fourth of a percent decrease), 7.5% (a three-fourths of a percent increase), and 8.0% (a one and one-fourth of a percent increase).

	0.75% Decrease: (6.0%)	0.25% Decrease: (6.5%)	Current Assumption: (6.75%)	0.75% Increase: (7.5%)	1.25% Increase: (8.0%)
<b><u>Funded Status</u></b>					
Actuarial Accrued Liability	\$ 17,331,998,508	\$ 16,524,169,698	\$ 16,145,680,789	\$ 15,102,065,632	\$ 14,475,520,023
Actuarial Value of Assets	<u>12,947,283,233</u>	<u>12,947,283,233</u>	<u>12,947,283,233</u>	<u>12,947,283,233</u>	<u>12,947,283,233</u>
Unfunded Actuarial Accrued Liability	\$ 4,384,715,275	\$ 3,576,886,465	\$ 3,198,397,556	\$ 2,154,782,399	\$ 1,528,236,790
Funded Ratio	74.7%	78.4%	80.2%	85.7%	89.4%
<b><u>Annual Required Contribution Rate</u></b>					
Normal Cost Percentage	6.50%	5.75%	5.41%	4.53%	4.03%
UAAL Amortization Percentage	<u>6.52%</u>	<u>5.60%</u>	<u>5.14%</u>	<u>3.75%</u>	<u>2.82%</u>
Annual Required Contribution Percentage	13.02%	11.35%	10.55%	8.28%	6.85%

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SECTION III - ACCOUNTING

**ACCOUNTING**

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SECTION III - ACCOUNTING

**REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27**

**A. Assumptions and Methods Under GASB #25 and #27**

Under the Governmental Accounting Standards Board (GASB) Statements No. 25 and No. 27, as amended by GASB No. 50, certain information about the plan is required to be disclosed. The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	June 30, 2013
Actuarial Cost Method	Entry Age Normal (Level Percent of Payroll)
Amortization Method	Level Dollar
Amortization Period	30 Years, Closed
Actuarial Value of Assets	4-Year Smoothed Market Value with 20% Corridor
Actuarial Assumptions:	
Investment Rate of Return	6.75%
Future Salary Increases	3.25% - 4.5% (includes 3.0% wage inflation)
Cost-of-Living Increases	1.0% compounded annually on employer funded pension

**B. Membership Data**

The plan consisted of the following membership as of June 30, 2013, the date of the latest actuarial valuation:

Retired members, beneficiaries and disabled members receiving benefits:	75,950
Terminated vested plan members entitled to but not yet receiving benefits:	23,496
Terminated non-vested plan members entitled to a refund of ASA balance:	51,065
Active Plan Members:	<u>137,937</u>
Total membership:	288,448

SECTION III - ACCOUNTING

**REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)**

**C. Total PERF – Statement of Fiduciary Net Position**

1. Assets		
a. Cash	\$	6,128,995
b. Receivables		
i. Contributions Receivable	\$	9,160,520
ii. Miscellaneous Receivables		862,177
iii. Investments Receivable		1,106,242,196
iv. Interest and Dividends		43,339,916
v. Due From Other Funds		5,668,762
vi. Total Receivables: (1)(b)(i) + (1)(b)(ii) + (1)(b)(iii) + (1)(b)(iv) + (1)(b)(v)	\$	1,165,273,571
c. Total Investments		13,434,424,071
d. Net Capital Assets		9,261,368
e. Total Assets: (1)(a) + (1)(b)(vi) + (1)(c) + (1)(d)	\$	14,615,088,005
2. Liabilities		
a. Accounts Payable	\$	5,001,456
b. Retirement Benefits Payable		775,431
c. Salaries and Benefits Payable		2,588,544
d. Investments Payable		1,307,756,805
e. Securities Lending Obligations		497,526,244
f. Securities Sold Under Agreement to Repurchase		79,669,875
g. Due To Other Funds		1,167,932
h. Total Liabilities: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) + (2)(g)	\$	1,894,486,287
3. Net Position Restricted for Pension Benefits: (1)(e) - (2)(h)	\$	<b>12,720,601,718</b>

SECTION III - ACCOUNTING

**REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)**

**D. Total PERF – Statement of Changes in Fiduciary Net Position**

1.	Net Position as of June 30, 2012	\$	12,243,753,114
2.	Revenue (Additions)		
a.	Contributions		
i.	Member Contributions	\$	156,407,612
ii.	Employer Contributions		455,658,474
iii.	Other Contributions		-
iv.	Total Contributions: (2)(a)(i) + (2)(a)(ii) + (2)(a)(iii)	\$	612,066,086
b.	Investment Income/Loss		
i.	Investment Income/Loss	\$	755,012,033
ii.	Securities Lending Income		2,720,346
iii.	Securities Lending Expenses		(407,502)
iv.	Other Investment Expenses		(65,990,598)
v.	Net Investment Income: (2)(b)(i) + (2)(b)(ii) + (2)(b)(iii) + (2)(b)(iv)	\$	691,334,279
c.	Other Additions		
i.	Interfund Transfers	\$	4,363,039
ii.	Miscellaneous Income		30,986
iii.	Total Other Additions: (2)(c)(i) + 2(c)(ii)	\$	4,394,025
d.	Total Revenue (Additions): (2)(a)(iv) + (2)(b)(v) + (2)(c)(iii)	\$	1,307,794,390
3.	Expenses (Deductions)		
a.	Pension and Disability Benefits	\$	722,585,273
b.	Death, Survivor, and Funeral Benefits		-
c.	Distributions of Contributions and Interest		68,774,616
d.	Interfund Transfers		10,404,621
e.	Pensions Relief Distributions		-
f.	Local Unit Withdrawals		-
g.	Administrative and Project Expenses		29,181,276
h.	Total Expenses (Deductions): (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e) + (3)(f) + (3)(g)	\$	830,945,786
4.	Changes in Net Position Restricted for Pension Benefits: (2)(d) - (3)(h)	\$	476,848,604
5.	Net Position as of June 30, 2013: (1) + (4)	\$	<b>12,720,601,718</b>

SECTION III - ACCOUNTING

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)

**E. Total PERF – Schedule of Funding Progress <sup>1</sup>**

1. Actuarial Valuation Date June 30	2. Actuarial Value of Assets	3. Actuarial Accrued Liability (AAL)	4. Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	5. Funded Ratio (2) / (3)	6. Current Payroll gav	7. UAAL as a % of Payroll (4) / (6)
2008	\$ 12,780,116,052	\$ 13,103,221,177	\$ 323,105,125	97.5%	\$ 4,600,353,894	7.0%
2009	12,569,335,911	13,506,280,351	936,944,440	93.1%	4,931,422,940	19.0%
2010	12,357,199,014	14,506,052,201	2,148,853,187	85.2%	4,896,012,580	43.9%
2011	12,000,586,310	14,913,147,293	2,912,560,983	80.5%	4,818,773,680	60.4%
2012	12,088,224,658	15,784,239,911	3,696,015,253	76.6%	4,904,052,414	75.4%
2013	12,947,283,233	16,145,680,789	3,198,397,556	80.2%	4,766,909,874	67.1%

**F. State – Schedule of Funding Progress <sup>1,2</sup>**

1. Actuarial Valuation Date June 30	2. Actuarial Value of Assets	3. Actuarial Accrued Liability (AAL)	4. Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	5. AAL Funded Ratio (2) / (3)	6. Current Payroll	7. UAAL as a % of Payroll (4) / (6)
2008	\$ 4,776,663,937	\$ 4,821,023,605	\$ 44,359,668	99.1%	\$ 1,661,248,319	2.7%
2009	4,548,408,448	4,869,897,611	321,489,163	93.4%	1,749,780,803	18.4%
2010	4,374,384,859	5,248,751,427	874,366,568	83.3%	1,730,479,696	50.5%
2011	4,158,786,069	5,264,131,212	1,105,345,143	79.0%	1,641,685,770	67.3%
2012	4,141,524,168	5,542,414,195	1,400,890,027	74.7%	1,648,023,022	85.0%
2013	4,415,371,545	5,690,281,046	1,274,909,501	77.6%	1,647,453,669	77.4%

**G. Political Subdivisions – Schedule of Funding Progress <sup>1,2</sup>**

1. Actuarial Valuation Date June 30	2. Actuarial Value of Assets	3. Actuarial Accrued Liability (AAL)	4. Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	5. AAL Funded Ratio (2) / (3)	6. Current Payroll	7. UAAL as a % of Payroll (4) / (6)
2008	\$ 8,003,452,115	\$ 8,282,197,572	\$ 278,745,457	96.6%	\$ 2,939,105,575	9.5%
2009	8,020,927,463	8,636,382,740	615,455,277	92.9%	3,181,642,137	19.3%
2010	7,982,814,155	9,257,300,774	1,274,486,619	86.2%	3,165,532,884	40.3%
2011	7,841,800,241	9,649,016,081	1,807,215,840	81.3%	3,177,087,910	56.9%
2012	7,946,700,490	10,241,825,716	2,295,125,226	77.6%	3,256,029,392	70.5%
2013	8,531,911,688	10,455,399,743	1,923,488,055	81.6%	3,119,456,205	61.7%

<sup>1</sup> Valuation results prior to June 30, 2010 were calculated by the prior actuary.

<sup>2</sup> As requested by INPRS, one-third (1/3) of the retired / disabled / beneficiary member liability, ASA account balances, and ASA annuities has been allocated to the State and the remaining two-thirds (2/3) to the Political Subdivisions.

SECTION III - ACCOUNTING

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)

**H. Total PERF – Schedule of Employer Contributions <sup>1</sup>**

1. Plan Year Ending June 30	2. Annual Required Contribution (ARC) <sup>2</sup>	3. Actual Employer Contribution	4. % of ARC <u>(3) / (2)</u>
2008	\$ 291,397,103	\$ 303,876,594	104.3%
2009	316,059,105	323,151,092	102.2%
2010	360,183,300	331,089,590	91.9%
2011	483,842,478	342,778,706	70.8%
2012	509,723,901	397,842,387	78.1%
2013	477,342,132	455,658,474	95.5%

**I. State – Schedule of Employer Contributions <sup>1</sup>**

1. Plan Year Ending June 30	2. Annual Required Contribution (ARC) <sup>2</sup>	3. Actual Employer Contribution	4. % of ARC <u>(3) / (2)</u>
2008	\$ 99,134,700	\$ 106,867,251	107.8%
2009	107,981,141	111,214,012	103.0%
2010	118,199,909	111,554,875	94.4%
2011	176,289,960	115,232,212	65.4%
2012	183,389,316	138,327,474	75.4%
2013	160,149,638	157,580,603	98.4%

**J. Political Subdivisions – Schedule of Employer Contributions <sup>1</sup>**

1. Plan Year Ending June 30	2. Annual Required Contribution (ARC) <sup>2</sup>	3. Actual Employer Contribution	4. % of ARC <u>(3) / (2)</u>
2008	\$ 192,262,403	\$ 197,009,343	102.5%
2009	208,077,964	211,937,080	101.9%
2010	241,983,391	219,534,715	90.7%
2011	307,552,518	227,546,494	74.0%
2012	326,334,585	259,514,913	79.5%
2013	317,192,494	298,077,871	94.0%

<sup>1</sup> Valuation results prior to June 30, 2010 were calculated by the prior actuary.

<sup>2</sup> For the year ending June 30, 2012, the ARC amount shown is based on the ARC Rate developed in the actuarial valuation completed one year prior to the beginning of the fiscal year multiplied by projected payroll for the fiscal year. Starting with the year ending June 30, 2013, the ARC amount is based on the ARC Rate developed in the actuarial valuation completed one year prior to the beginning of the fiscal year multiplied by actual payroll during the fiscal year.



SECTION III - ACCOUNTING

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)

**K. State – Development of Net Pension Obligation (NPO)**

1. Plan Year Ending June 30	2. Annual Required Contribution (ARC)	3. Interest on NPO at Discount Rate	4. ARC Adjustment (9) / (5)	5. Amortization Factor	6. Net Pension Cost (NPC) (2) + (3) - (4)	7. Actual Employer Contribution	8. Change in NPO (6) - (7)	9. NPO at Beginning of Year	10. NPO at End of Year (8) + (9)
2011	\$ 176,289,960	\$ (3,911,361)	\$ (4,502,909)	12.4090	\$ 176,881,508	\$ 115,232,212	\$ 61,649,296	\$ (55,876,592)	\$ 5,772,704
2012	183,389,316	404,089	465,203	12.4090	183,328,202	138,327,474	45,000,728	5,772,704	50,773,432
2013	160,149,638	3,427,207	3,989,364	12.7272	159,587,481	157,580,603	2,006,878	50,773,432	52,780,310

**L. Political Subdivisions – Development of Net Pension Obligation (NPO)**

1. Plan Year Ending June 30	2. Annual Required Contribution (ARC)	3. Interest on NPO at Discount Rate	4. ARC Adjustment (10) / (5)	5. Amortization Factor	6. Net Pension Cost (NPC) (2) + (3) - (4)	7. Actual Employer Contribution	8. Adjustment for Withdrawn and Merged Units <sup>1</sup>	9. Change in NPO (6) - (7) + (8)	10. NPO at Beginning of Year	11. NPO at End of Year (9) + (10)
2011	\$ 307,552,518	\$ (5,910,065)	\$ (6,803,893)	12.4090	\$ 308,446,346	\$ 227,546,494	\$ (321,397)	\$ 80,578,455	\$ (84,429,504)	\$ (3,851,049)
2012	326,334,585	(269,573)	(310,343)	12.4090	326,375,355	259,514,913	3,789,810	70,650,252	(3,851,049)	66,799,203
2013	317,192,494	4,508,946	5,248,539	12.7272	316,452,901	298,077,871	230,678	18,605,708	66,799,203	85,404,911

<sup>1</sup> Individual Political Subdivisions can withdraw from the plan or merge with other Political Subdivisions which prevents the NPO from reconciling year over year.

SECTION III - ACCOUNTING

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27 (CONTINUED)

**M. State – Three-Year Trend Information**

1. Plan Year Ending June 30	2. Net Pension Cost (NPC)	3. Actual Employer Contribution	4. % of NPC <u>(3) / (2)</u>
2011	\$ 176,881,508	\$ 115,232,212	65.1%
2012	183,328,202	138,327,474	75.5%
2013	159,587,481	157,580,603	98.7%

**N. Political Subdivisions – Three-Year Trend Information**

1. Plan Year Ending June 30	2. Net Pension Cost (NPC)	3. Actual Employer Contribution	4. % of NPC <u>(3) / (2)</u>
2011	\$ 308,446,346	\$ 227,546,494	73.8%
2012	326,375,355	259,514,913	79.5%
2013	316,452,901	298,077,871	94.2%

SECTION III - ACCOUNTING

**O. Solvency Test <sup>1</sup>**

Portion of Actuarial Liability Provided by Assets

1.	2.	3.	4.	5.	6.
As of June 30	ASA Balances	Retired and Beneficiaries	Non-Retired Members (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets
2008	2,694,331,410 100.0%	4,227,365,567 100.0%	6,181,524,200 94.8%	13,103,221,177 97.5%	12,780,116,052
2009	2,669,318,240 100.0%	4,611,256,619 100.0%	6,225,705,492 85.0%	13,506,280,351 93.1%	12,569,335,911
2010	2,780,570,388 100.0%	4,931,592,130 100.0%	6,793,889,683 68.4%	14,506,052,201 85.2%	12,357,199,014
2011	2,805,023,137 100.0%	5,370,786,260 100.0%	6,737,337,896 56.8%	14,913,147,293 80.5%	12,000,586,310
2012	2,749,448,762 100.0%	5,895,779,209 100.0%	7,139,011,940 48.2%	15,784,239,911 76.6%	12,088,224,658
2013	2,796,102,616 100.0%	6,367,819,294 100.0%	6,981,758,879 54.2%	16,145,680,789 80.2%	12,947,283,233

<sup>1</sup> Valuation results prior to June 30, 2010 were calculated by the prior actuary.

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SECTION IV - CENSUS DATA

**CENSUS DATA**

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SECTION IV - CENSUS DATA

**A. Reconciliation of Participant Data**<sup>1</sup>

	Inactive Non-Vested		Inactive Deceased <sup>2</sup>	Disabled	Retired	Beneficiary	ASA Only		Total
	Actives	ASA Balance					Inactive Vested	Active and Inactive	
Total as of June 30, 2012	145,519	47,392	21,200	482	4,786	59,394	8,812	-	287,585
New Entrants	16,977	-	-	-	-	-	-	70	17,047
Rehires	1,181	(850)	(330)	(1)	-	-	-	-	-
Non-Vested Terminations	(13,030)	13,045	(12)	(2)	(1)	-	-	-	-
Vested Terminations	(4,480)	(468)	4,964	(1)	(3)	(12)	-	-	-
Retirements	(3,617)	(43)	(1,021)	-	(7)	4,688	-	-	-
Disabilities	(240)	(18)	(85)	-	373	(30)	-	-	-
Death with Beneficiary	(60)	(2)	(19)	(38)	(94)	(499)	712	-	-
Death - Entitled to ASA and/or Pension Benefits	(42)	(15)	(12)	75	-	(4)	(2)	-	-
Death without Beneficiary	(138)	(84)	(53)	(231)	(152)	(1,621)	(470)	-	(2,749)
Refunds	(4,178)	(8,132)	(1,237)	(74)	-	-	-	-	(13,621)
TRF Transfer / Millie Morgan	(14)	(17)	(313)	(1)	-	-	-	-	(345)
Data Adjustments	(11)	164	281	17	5	44	31	-	531
Total as of June 30, 2013	137,867	50,972	23,363	226	4,907	61,960	9,083	70	288,448

<sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include multiple records for individual members such as members with multiple periods of service.

<sup>2</sup> Inactive deceased counts include 133 members with vested benefits.

SECTION IV - CENSUS DATA

**B. Census Information as of June 30, 2013<sup>1</sup>**

	<u>Male</u>	<u>Female</u>	<u>Total</u>
1. Active			
a. Number			
i. State	18,684	24,058	42,742
ii. Political Subdivisions	35,588	59,537	95,125
iii. ASA Only	<u>23</u>	<u>47</u>	<u>70</u>
iv. Total	54,295	83,642	137,937
b. Average Age	47.4	48.1	47.8
c. Average Years of Service	12.0	11.3	11.6
d. Covered Payroll of Actives			
i. State	785,971,889	861,481,780	1,647,453,669
ii. Political Subdivisions	<u>1,408,644,986</u>	<u>1,710,811,219</u>	<u>3,119,456,205</u>
iii. Total	\$ 2,194,616,875	\$ 2,572,292,999	\$ 4,766,909,874
2. Inactive - Vested			
a. Number	6,903	16,593	23,496
b. Average Age	53.0	53.2	53.1
c. Average Years of Service	13.5	11.4	12.0
3. Inactive - Non-Vested			
a. Number			51,065
4. Retiree/Beneficiary/Disabled			
a. Number	24,467	51,483	75,950
b. Average Age	71.0	73.2	72.5
c. Annual Benefits Payable			
i. Pension	201,500,019	314,368,822	515,868,841
ii. ASA Annuities	<u>42,091,183</u>	<u>60,017,284</u>	<u>102,108,467</u>
iii. Total	\$ 243,591,202	\$ 374,386,106	\$ 617,977,308

<sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. members with multiple periods of service).

SECTION IV - CENSUS DATA

**C. Schedule of Active Member Valuation Data <sup>1,2</sup>**

1. As of June 30	2. Active Members	3. Annual Payroll (\$ in Thousands)	4. Average Pay (3) / (2)	5. Annual Percent Change
2005	141,428	\$ 4,318,450	30,535	3.5%
2006	140,563	4,322,180	30,749	0.7%
2007	138,863	4,385,676	31,583	2.7%
2008	140,146	4,600,354	32,825	3.9%
2009	147,792	4,931,423	33,367	1.7%
2010	149,877	4,896,013	32,667	(2.1%)
2011	147,933	4,818,774	32,574	(0.3%)
2012	145,519	4,904,052	33,700	3.5%
2013	137,937	4,766,910	34,559	2.5%

<sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. members with multiple periods of service).

<sup>2</sup> Valuation results prior to June 30, 2010 were calculated by the prior actuary.

SECTION IV - CENSUS DATA

**D. Schedule of Retirees, Beneficiaries, and Disabled Members** <sup>1,2,3</sup>

(\$ in Thousands)

1.	2.	3.	4.	5.	6.	7.	8.	9.
Fiscal Year Ending	Added		Removed		End of Year <sup>4</sup>		% Increase in	Average
June 30	Number	Annual Allowances (\$ in Thousands)	Number	Annual Allowances (\$ in Thousands)	Number	Annual Allowances (\$ in Thousands)	Annual Allowances	Annual Allowances
2005	4,499	\$ 35,845	1,732	\$ 8,358	57,121	\$ 354,285	8.8%	\$ 6,202
2006	3,403	29,572	2,241	14,440	58,283	377,611	6.6%	6,479
2007	4,633	42,653	2,584	15,229	60,332	412,745	9.3%	6,841
2008	5,376	43,915	3,284	18,022	62,424	436,749	5.8%	6,996
2009	6,047	55,726	3,372	19,103	65,099	477,553	9.3%	7,336
2010	4,827	39,214	2,760	19,022	67,166	498,199	4.3%	7,417
2011	5,402	56,185	2,188	11,698	70,380	539,747	8.3%	7,669
2012	4,751	49,766	2,139	12,540	72,992	576,678	6.8%	7,901
2013	5,231	55,523	2,273	13,898	75,950	617,977	7.2%	8,137

<sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. members with multiple periods of service).

<sup>2</sup> Valuation results prior to June 30, 2010 were calculated by the prior actuary.

<sup>3</sup> Annual Allowances include pension and ASA annuity benefits.

<sup>4</sup> End of year annual allowances are not equal to the prior end of year annual allowances plus additions and less removals because of reductions for beneficiary benefits, data changes, and cost-of-living increases.



SECTION IV - CENSUS DATA

**E. Distribution of Active Members by Age and Service <sup>1</sup>**

<b>Attained Age</b>	Distribution of Active Members by Age and Service as of June 30, 2013										
	Under 1 year	1 to 4 years	5 to 9 years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	Over 40 years	Total
<25	1,836	1,557	32	1	1						3,427
25-29	2,456	5,363	1,692	16		1					9,528
30-34	1,566	4,168	4,445	1,125	28						11,332
35-39	1,314	3,260	3,831	2,628	843	16	3				11,895
40-44	1,361	3,550	4,162	2,918	2,262	768	44	5	1		15,071
45-49	1,153	3,291	4,385	3,366	2,494	2,032	1,030	72	3	4	17,830
50-54	1,002	2,970	4,532	4,127	3,445	2,387	2,316	1,233	104	3	22,119
55-59	819	2,653	3,822	3,750	3,627	2,904	2,337	1,820	1,061	58	22,851
60-64	494	1,750	2,690	2,643	2,346	2,207	1,771	1,047	937	375	16,260
65-69	182	640	1,288	947	740	622	550	329	246	172	5,716
70&Up	64	261	482	409	309	145	103	53	48	34	1,908
Total	12,247	29,463	31,361	21,930	16,095	11,082	8,154	4,559	2,400	646	137,937

<sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. members with multiple periods of service).

SECTION IV - CENSUS DATA

**F. Distribution of Inactive Vested Members by Age and Service<sup>1</sup>**

<b>Attained Age</b>	Distribution of Inactive Vested Members by Age and Vesting Service as of June 30, 2013							Total
	Under 5 years	5 to 9 years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	Over 30 years	
<25			2					2
25-29			8					8
30-34			306	1				307
35-39			1,148	212	5			1,365
40-44			1,488	941	215	2		2,646
45-49			1,750	893	552	121	25	3,341
50-54			2,286	1,250	628	354	95	4,613
55-59			2,433	1,506	766	368	227	5,300
60-64			2,272	891	510	232	261	4,166
65-69			653	252	190	127	151	1,373
70&Up			129	66	56	47	77	375
Total			12,475	6,012	2,922	1,251	836	23,496

<sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. members with multiple periods of service).

SECTION IV - CENSUS DATA

**G. Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired** <sup>1</sup>

<b>Attained Age</b>	<b>Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired as of June 30, 2013</b>							
	<b>Under 5 years</b>	<b>5 to 9 years</b>	<b>10 to 14 years</b>	<b>15 to 19 years</b>	<b>20 to 24 years</b>	<b>25 to 29 years</b>	<b>Over 30 years</b>	<b>Total</b>
<40	13	9						22
40-44	46	36	11					93
45-49	82	75	40	17	4			218
50-54	527	163	106	47	28	1		872
55-59	2,676	936	210	122	57	5		4,006
60-64	6,371	2,695	779	205	100	14	3	10,167
65-69	8,431	4,863	1,867	664	106	18	16	15,965
70-74	3,006	6,213	3,550	1,357	443	43	20	14,632
75-79	598	2,310	4,422	2,860	814	252	40	11,296
80-84	175	559	1,331	3,945	1,972	512	204	8,698
85-89	45	165	384	962	2,827	1,231	360	5,974
90&Up	5	38	82	215	537	1,736	1,394	4,007
<b>Total</b>	<b>21,975</b>	<b>18,062</b>	<b>12,782</b>	<b>10,394</b>	<b>6,888</b>	<b>3,812</b>	<b>2,037</b>	<b>75,950</b>

<sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. members with multiple periods of service).

SECTION V - CENSUS DATA

**H. Schedule of Benefit Recipients by Type of Benefit Option**

Number of Benefit Recipients by Benefit Option as of June 30, 2013

Amount of Monthly Benefit	Five Year Guaranteed Beneficiary Benefit (Option 10)	Benefit with No Guarantee (Option 20)	Joint with Full Survivor Benefits (Option 30)	Joint with Two-Thirds Survivor Benefits (Option 40)	Joint with One-Half Survivor Benefits (Option 50)	Integration with Social Security (Option 61)	Five Year Guaranteed Beneficiary Benefit with ASA Cash Refund (Option 71)	Benefit with No Guarantee (Option 80)	Benefit Recipients		Total
									Survivors	Disabled	
\$ 1 - 500	11,190	7,637	6,166	652	1,559	300	960	0	6,071	3,116	37,651
501 - 1,000	5,564	6,417	3,769	825	1,689	185	971	1	2,218	1,342	22,981
1,001 - 1,500	1,682	2,796	1,922	461	894	68	425	0	555	341	9,144
1,501 - 2,000	570	1,181	748	261	337	56	176	0	156	85	3,570
2,001 - 3,000	273	690	459	180	270	49	135	0	71	21	2,148
over 3,000	45	170	84	53	53	10	27	0	12	2	456
<b>Total</b>	<b>19,324</b>	<b>18,891</b>	<b>13,148</b>	<b>2,432</b>	<b>4,802</b>	<b>668</b>	<b>2,694</b>	<b>1</b>	<b>9,083</b>	<b>4,907</b>	<b>75,950</b>

**I. Schedule of Average Benefit Payments as of June 30, 2013<sup>1</sup>**

	Years of Credited Service								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
Average Monthly Defined Benefit	\$ 100	\$ 171	\$ 269	\$ 370	\$ 515	\$ 715	\$ 1,160	\$ 569	
Average Monthly ASA Annuity	\$ 37	\$ 43	\$ 94	\$ 124	\$ 180	\$ 244	\$ 425	\$ 199	
Average Final Average Salary	\$ 26,869	\$ 21,489	\$ 22,669	\$ 25,080	\$ 27,190	\$ 30,044	\$ 37,145	\$ 28,019	
Number of Benefit Recipients	632	2,038	12,866	19,825	15,757	11,079	13,753	75,950	

<sup>1</sup> For some members average salary at retirement and years of credited service was not available. The average salary for each group excludes these members. Retired members with credited service information that is missing are counted in the "10-14" group.

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SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS

**ACTUARIAL ASSUMPTIONS AND METHODS**

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SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS

**A. Actuarial Assumptions**

The assumptions used in the valuation were selected and approved by the INPRS Board of Trustees. The demographic assumptions are reviewed every five years through a study of actual experience. In this way, the actuary provides guidance to the Board in selecting the assumptions. The actuary and other economic and investment professionals also provide advice to the Board for selecting the economic assumptions. In our opinion, the assumptions are reasonable for purposes of this valuation.

Interest Rate / Investment Return      6.75% (net of administrative and investment expenses)

Interest on Member ASA Balances      3.0% per year

Future Salary Increases      Based on 2005-2010 experience. Illustrative rates shown below:

<u>Age</u>	<u>Inflation</u>	<u>Productivity, Merit, and Promotion</u>	<u>Total Individual Salary growth</u>
<31	3.0%	1.5%	4.5%
31-45	3.0%	1.0%	4.0%
46-60	3.0%	0.5%	3.5%
>= 61	3.0%	0.25%	3.25%

Inflation      3.0% per year

Cost of Living Increases      1.0% per year in retirement

Mortality (Healthy and Disabled)      2013 IRS Static Mortality projected five (5) years with Scale AA

SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS

**A. Actuarial Assumptions (continued)**

Disability

Based on 2000 - 2005 experience for males and 1995 - 2000 experience for females. Recent experience has been consistent. Illustrative rates shown below:

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.0067%	0.0050%
30	0.0208%	0.0158%
40	0.0646%	0.0496%
50	0.2005%	0.1556%
60	0.6220%	0.4881%
70	0.1000%	0.1000%
80	0.0000%	0.0000%

Termination

Select and ultimate tables based on 2005-2010 experience. Illustrative rates shown below:

State (Male)

Earnings < \$20,000

<u>Age</u>	<u>Service</u>					
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5+</u>
20	57%	40%	23%	19%	17%	13%
30	56%	34%	21%	17%	15%	11%
40	55%	29%	18%	15%	13%	9%
50	55%	24%	15%	13%	11%	6%
60+	55%	20%	12%	10%	9%	4%

State (Male)

Earnings >= \$20,000

<u>Age</u>	<u>Service</u>					
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5+</u>
20	43%	26%	13%	10%	9%	7%
30	39%	20%	12%	9%	8%	6%
40	36%	16%	11%	8%	7%	5%
50	36%	14%	9%	7%	7%	4%
60+	37%	13%	8%	6%	6%	3%

State (Female)

Earnings < \$20,000

<u>Age</u>	<u>Service</u>					
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5+</u>
20	57%	40%	26%	26%	21%	16%
30	54%	36%	23%	23%	19%	14%
40	54%	32%	20%	19%	16%	11%
50	54%	29%	17%	15%	13%	8%
60+	54%	25%	15%	11%	11%	6%

**SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS**

**A. Actuarial Assumptions (continued)**

Termination (continued)

State (Female)		Service					
Earnings >= \$20,000		0	1	2	3	4	5+
Age							
20		43%	25%	14%	14%	11%	8%
30		36%	22%	13%	12%	10%	7%
40		35%	19%	12%	10%	9%	6%
50		35%	17%	10%	9%	7%	5%
60+		36%	16%	9%	7%	6%	4%

Political Subdivisions (Male)		Service					
Earnings < \$20,000		0	1	2	3	4	5+
Age							
20		33%	25%	13%	12%	10%	7%
30		29%	21%	11%	10%	9%	6%
40		28%	17%	10%	8%	8%	5%
50		26%	14%	8%	7%	6%	4%
60+		25%	11%	6%	5%	5%	3%

Political Subdivisions (Male)		Service					
Earnings >= \$20,000		0	1	2	3	4	5+
Age							
20		30%	19%	7%	7%	5%	4%
30		22%	14%	7%	6%	5%	4%
40		22%	11%	6%	5%	4%	3%
50		21%	10%	5%	5%	4%	3%
60+		20%	9%	4%	4%	3%	2%

Political Subdivisions (Female)		Service					
Earnings < \$20,000		0	1	2	3	4	5+
Age							
20		36%	30%	16%	12%	11%	8%
30		32%	25%	14%	11%	10%	7%
40		32%	21%	12%	10%	9%	5%
50		31%	18%	9%	8%	7%	4%
60+		30%	14%	7%	6%	5%	3%



SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS

**A. Actuarial Assumptions (continued)**

Termination (continued)

Political Subdivisions (Female)  
Earnings >= \$20,000

Age	Service					
	0	1	2	3	4	5+
20	31%	21%	10%	8%	7%	4%
30	24%	16%	9%	7%	6%	4%
40	23%	14%	8%	6%	5%	3%
50	23%	12%	7%	6%	5%	3%
60+	23%	11%	6%	5%	4%	2%

Retirement

Based on PERF experience 2005-2010. Illustrative rates shown below:

Age	Service				
	10	15	20	30	31 +
50	0%	4%	4%	4%	4%
55	0%	7%	7%	12%	7%
60	0%	10%	10%	10%	10%
65	30%	30%	30%	30%	30%
70	25%	25%	25%	25%	25%
75+	100%	100%	100%	100%	100%

Decrement Timing

Decrements are assumed to occur at the beginning of the year.

Spouse/Beneficiary

75% of male members and 60% of female members are assumed to be married and or to have a dependent beneficiary. Male members are assumed to be three (3) years older than their spouses and female members are assumed to be two (2) years younger than their spouses.

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## SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS

### **A. Actuarial Assumptions (continued)**

ASA Withdrawal	Active members are assumed to withdraw their ASA balance immediately upon decrement. Inactive members, vested and non-vested, are assumed to withdraw their ASA balance immediately on the valuation date. Annuitization is assumed to occur at no cost to INPRS.
Data Assumptions	<p>Actives and inactives with no date of birth are assumed to be age 48 and 46, respectively. Spouse gender is assumed to be the opposite gender of the member.</p> <p>Retirees and disabled members that are not married and do not have a retirement option listed are assumed to elect a 5-year certain and life annuity. Retirees and disabled members that are married and do not have a retirement option listed are assumed to be receiving a 100% joint and survivor annuity. Beneficiaries that do not have a retirement option listed are assumed to receive monthly payments for life.</p> <p>Actives and inactives with a date of death who have not received a distribution of their ASA or commenced a pension annuity are included in the valuation as follows (provided by INPRS):</p> <ul style="list-style-type: none"><li>- For non-vested members, the ASA Balance is included in the valuation</li><li>- For vested members, the ASA Balance is included in the valuation if one of the following is true:<ul style="list-style-type: none"><li>- Date of death is more than 3 years before the valuation date</li><li>- Age of the member is greater than or equal to 65 with less than 10 years of creditable service</li><li>- Age of the member is less than or equal to 65 with less than 15 years of creditable service</li></ul></li><li>- If neither of the items listed above are met, the ASA Balance and estimated pension annuity are included in the valuation.</li></ul>

#### Changes in Assumptions

There have been no changes in the actuarial assumptions since the June 30, 2012 valuation.

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## SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS

### **B. Actuarial Methods**

The actuarial methods used in this valuation were selected and approved by the Board. In general, the methods provide orderly funding of all benefits being accrued, as well as unfunded past-service benefit liabilities, over a period of thirty years. However, the smoothing methods employed in determining the Actuarial Value of Assets may accelerate or lengthen the effective funding period, depending on whether gains or losses are experienced. In our opinion, the actuarial methods are reasonable for the purposes of this valuation.

#### 1. Actuarial Cost Method

The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

Gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 30-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 30-year period. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

#### 2. Asset Valuation Method

Actuarial Value of Assets is equal to a four-year smoothing of gains and losses on the Market Value of Assets subject to a 20% corridor.

#### 3. Method for Allocation of Actuarial Accrued Liability and Normal Cost

The Actuarial Accrued Liability ("AAL") for members with multiple current and/or historical employers is allocated pro rata to each respective employer based on the service the member accrued at each employer. In the event service at each employer is not included in the data, the AAL is allocated evenly amongst all respective employers.

The Normal Cost for members with multiple current employers is allocated to each respective employer based on the salary the member earned at each employer. In the event salary at each employer is not included in the data, the Normal Cost is allocated evenly amongst all respective current employers.

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SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS

**B. Actuarial Methods (continued)**

4. Anticipated Payroll

The combined State and Political Subdivision Anticipated Payroll of \$4,766,909,874 for the fiscal year beginning July 1, 2013 is equal to the actual payroll during the prior year for members who are still active on the valuation date of \$4,502,721,568, adjusted for one year of assumed salary increases and expected employer pick up contributions. The Anticipated Payroll does not include amounts for members who have reached the age at which retirement is assumed to occur immediately.

5. Employer Contribution Rates

Based on the assumptions and methods previously described, an Actuarially Calculated Rate is computed for each employer. The Board considers this information, but has ultimate authority in setting the employer contribution rates, including any process used to migrate the Political Subdivisions toward a single Composite Rate.

6. Changes in Actuarial Methods

There have been no changes in the actuarial methods since the June 30, 2012 valuation.

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SECTION VI - SUMMARY OF PLAN PROVISIONS

**SUMMARY OF PLAN PROVISIONS**

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SECTION VI - SUMMARY OF PLAN PROVISIONS

**Summary of Plan Provisions**

The benefit provisions for PERF are set forth in IC 5-10.2 and 5-10.3. A summary of those defined pension benefit provisions is presented below:

Participation                      All full time employees of the State of Indiana and all full time employees of Political Subdivisions which have adopted the plan become members of PERF upon date of hire.

Eligibility for Defined Pension Benefits

- a. Normal Retirement      Earliest of:
  - Age 65 with 10 or more years of vesting service
  - Age 60 with 15 or more years of vesting service
  - Age 55 with sum of age and vesting service equal to 85 or more
  
- b. Early Retirement        Age 50 with 15 or more years of vesting service
  
- c. Late Retirement         Subject to continued employment after normal retirement
  
- d. Disability Retirement    5 or more years of vesting service and qualified for Social Security disability benefits or federal Civil Service disability benefits
  
- e. Termination             10 or more years of vesting service and no longer active (i.e. vested inactive)
  
- f. Pre-Retirement Death   15 or more years of vesting service if death occurs in service. If death occurs after separating from service, age 50 with 15 or more years of vesting service

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## SECTION VI - SUMMARY OF PLAN PROVISIONS

### **Summary of Plan Provisions (continued)**

#### Amount of Benefits

- a. Normal Retirement      The normal retirement benefit is a pension payable for life with 60 months guaranteed and is equal to 1.1% of average monthly earnings<sup>1</sup> multiplied by years of creditable service earned.
  
- b. Early Retirement      The early retirement benefit is the accrued retirement benefit determined as of the early retirement date and payable commencing at the normal retirement date. A member may elect to have the benefit commence prior to normal retirement provided the benefit is reduced by 1/10% for each of the first 60 months and by 5/12% for each of the next 120 months that the benefit commencement date precedes the normal retirement date.
  
- c. Late Retirement      The late retirement benefit is calculated in the same manner as the normal retirement benefit. Creditable service and earnings earned after normal retirement is included in the computation.
  
- d. Disability Retirement      The disability retirement benefit is the accrued retirement benefit determined as of the disability date and payable commencing the month following disability date without reduction for early commencement.
  
- e. Termination      The termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing at age 65. If the member has 15 or more years of creditable service, then the member may elect to receive a reduced early retirement benefit prior to age 65.
  
- f. Pre-Retirement Death      The spouse or dependent beneficiary is entitled to receive the monthly life benefit under the assumption that the member retired on the later of age 50 or the date before the date of death and elected the joint and full survivor option.

<sup>1</sup> Average monthly earnings is the monthly average of earnings during 20 quarters (in groups of 4 consecutive contribution quarters) preceding retirement that produce the highest such average. Earnings include basic salary, the member's 3% mandatory contribution paid by the employer, the member's salary reduction agreement under Section 125, 430(b), or 457 of the Internal Revenue Code, and up to \$2,000 of additional compensation received from the employer in anticipation of the member's termination or retirement.

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SECTION VI - SUMMARY OF PLAN PROVISIONS

**Summary of Plan Provisions (continued)**

Member Contributions                      Each member is required to contribute to an Annuity Savings Account at the rate of 3% of pay (unless the employer has opted to make the contribution for the employee). These contributions are kept on deposit and credited with interest based on the investment elections of each member until such time as they are withdrawn or annuitized by the member.

The Annuity Savings Account benefit is in addition to the annuity benefits provided by employer contributions.

Optional Forms of Payment

- a. 5-Year Guaranteed Beneficiary Benefit (Option 10)                      Member will receive a monthly benefit for the rest of their life. If the member dies before receiving benefits for 5 years, the beneficiary will receive that monthly benefit for the remainder of those 5 years or a lump sum distribution equal to the present value of those payments. After 5 years, there are no payments available to the beneficiary.
- b. Benefit with No Guarantee (Option 20)                      Member will receive a monthly benefit for life, but there are no monthly payments to anyone after death. However, the balance of the Annuity Savings Account will be distributed to the beneficiary or estate if it is larger than the payments previously made to the member.
- c. Joint with Full Survivor Benefits (Option 30)                      Member will be paid a monthly benefit for life. After death, the same monthly benefit will be paid to the beneficiary for their lifetime.
- d. Joint with Two-Thirds Survivor Benefits (Option 40)                      Member will be paid a monthly benefit for life. After death, two-thirds (2/3) of the benefit will be paid to the beneficiary for their lifetime.
- e. Joint with One-Half Survivor Benefits (Option 50)                      Member will be paid a monthly benefit for life. After death, one-half (1/2) of the benefit will be paid to the beneficiary for their lifetime.



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SECTION VI - SUMMARY OF PLAN PROVISIONS

**Summary of Plan Provisions (continued)**

Optional Forms of Payment (Continued)

- f. **Integration with Social Security (Option 61)** A member who retires between ages 50 and 62 may integrate the PERF monthly pension benefit with the member's estimated Social Security benefits. This does not affect the amount of the benefit received from the Social Security Administration.

Before age 62, the member's benefits will equal the sum of the member's Social Security estimate, multiplied by actuarial factors, and the member's early retirement benefit. This will result in the member receiving a larger monthly benefit payment before age 62. After age 62, the member's benefit will equal the difference between the member's Social Security estimate, multiplied by actuarial factors, and the member's pre-62 monthly pension benefit. Depending upon the member's estimated Social Security disbursement, benefit payments may be greatly reduced or terminated at age 62.

- g. **5-Year Guaranteed Beneficiary Benefit with ASA Cash Refund (Option 71)** In order to select this option, the member must choose to combine at least a portion of their ASA with their lifetime monthly pension benefit. If selected, the member will receive a monthly benefit for the rest of their life. If the member dies before receiving payments for 5 years, the beneficiary will receive the pension portion of their monthly benefit for the remainder of those 5 years or a lump sum equal to the present value of those remaining payments. Also, upon death (whether death occurs before or after receiving 5 years of benefits), the beneficiary may receive any remaining balance of the Annuity Savings Account.

Annuity Savings Account ("ASA") Payment Forms

- a. **Leave ASA Invested with PERF** Members may choose to leave their ASA invested with PERF. According to IRS regulations, the member must begin distribution at age 70 1/2. Until the member elects to receive funds, they will remain invested according to member direction.
- b. **Increase Lifetime Pension Benefit** The member may choose to annuitize their ASA balance to increase their monthly retirement benefit.

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SECTION VI - SUMMARY OF PLAN PROVISIONS

**Summary of Plan Provisions (continued)**

Annuity Savings Account ("ASA") Payment Forms (continued)

- c. **Withdraw Entire ASA**     The member withdraws their entire ASA by means of either a direct rollover, complete withdrawal, or partial rollover to a qualified plan for the Taxable Portion of their ASA and, if it applicable, one of these choices for the 1986 Tax Basis Portion.
  
- d. **Withdraw 1986 Tax Basis Portion of ASA and Combine Taxable Portion with Pension Benefit**     The member withdraws the non-taxable (1986 Tax Basis) portion of their ASA in the form of a direct rollover, a complete distribution, or a partial rollover to a qualified plan, and then receives the balance of the account as a part of their monthly payment.

Cost-of-Living Adjustments

The monthly pension benefits for members in pay status are increased periodically to preserve purchasing power that is diminished due to inflation. Such increases are not guaranteed by Statute and have historically been provided on an "ad hoc" basis.

A "13th check" was paid to each member in pay status during September 2013. The amount of the 13th check varied based on the years of creditable service the member had earned prior to retirement.

ASA-Only Plan

Effective March 1, 2013, the ASA-Only Plan was made available to newly hired State employees. When hired, employees have the option of participating in the ASA-Only Plan or the traditional PERF Hybrid Plan. Members electing the ASA-Only Plan contribute 3% each year to an Annuity Savings Account and the State contributes a variable rate each year as determined by the Board. Members are immediately 100% vested in their 3% fixed contributions and are vested in the value of the variable rate contributions at 20% per full year of participation; meaning a member will be 100% vested after 5 full years of participation.

Changes in Provisions

The liability associated with expected annuitization of ASA balances was eliminated as of June 30, 2013 due to the Board's decision to modify ASA annuitizations starting October 1, 2014.

Effective March 1, 2013, the ASA-Only Plan described above was made available to newly hired State employees.

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SECTION VII - DEFINITIONS OF TECHNICAL TERMS

**Definitions of Technical Terms**

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Definitions of Technical Terms

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SECTION VII - DEFINITIONS OF TECHNICAL TERMS

**Definitions of Technical Terms**

Actual Rate	For valuations prior to June 30, 2011, the contribution rate expressed as a percentage of covered payroll on an annual basis (not less than 0.0%) that is the result of applying applicable smoothing rules to the prior year Actual Rate and current year Actuarially Calculated Rate. Beginning with the June 30, 2011 valuation, the Board resolved to discontinue use of the smoothing rules for establishing contribution rates/amounts.
Actuarial Accrued Liability (AAL)	That portion, as determined by a particular Actuarial Cost Method, of the Present Value of Future Benefits (PVFB) and expenses which is not provided for by future Normal Costs. Generally this means the portion of the PVFB attributable to past service.
Actuarial Assumptions	Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided pension benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
Actuarial Cost Method	A procedure for determining an actuarially equivalent allocation of the Present Value of Future Benefits to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.
Actuarially Equivalent	A method of making the actuarial present value of two series of payments equal as of a given date using the same assumptions.
Actuarial Gain/(Loss)	The difference between actual unfunded Actuarial Accrued Liability and anticipated unfunded Actuarial Accrued Liability – during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.
Actuarial Present Value	The single amount now that is equal to a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
Actuarial Valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

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**SECTION VII - DEFINITIONS OF TECHNICAL TERMS**

**Definitions of Technical Terms (continued)**

Actuarial Valuation Date	The date as of which an actuarial valuation is performed.
Actuarially Calculated Rate	The precise actuarial contribution rate expressed as a percentage of covered payroll that is determined by summing the Normal Cost and amortization of unfunded Actuarial Accrued Liability and dividing by anticipated payroll.
Amortization	The payment of a present value financial obligation on an installment basis over a future number of years.
Annual Required Contribution of the Employer (ARC)	The employer's periodic required contributions to a defined benefit pension plan, calculated in accordance with the plan provisions, actuarial assumptions, actuarial cost method and other actuarial method prescribed by Governmental Accounting Standards No. 25 and No. 27.
Creditable Service	Service credited under the system that was rendered before the date of the actuarial valuation.
Fresh Start	Re-starting amortization of the UAAL by eliminating existing bases and starting with a single amortization base equal to the current UAAL.
Funding Policy	The program for the amounts and timing of contributions to be made by plan members, employer, and other contributing entities (for example, state government contributions to a local government plan) to provide the benefits specified by a pension plan.
Level Dollar Amortization Method	The amount to be amortized is divided into equal dollar amounts to be paid over a given number of years; part of each payment is interest and part is principal (similar to a mortgage payment on a building). Because payroll can be expected to increase as a result of inflation, level dollar payments generally represent a decreasing percentage of payroll; in dollars adjusted for inflation, the payments can be expected to decrease over time.
Normal Cost (NC)	That portion of the present value of future benefits which is allocated to a valuation year by the Actuarial Cost Method. The normal cost is specific to the cost method used.

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SECTION VII - DEFINITIONS OF TECHNICAL TERMS

**Definitions of Technical Terms (continued)**

Plan Assets	Resources, usually in the form of stocks, bonds, and other classes of investments, that have been segregated and restricted in a trust, or equivalent arrangement, in which (a) employer contributions to the plan are irrevocable, (b) assets are dedicated to providing benefits to retirees and their beneficiaries, and (c) assets are legally protected from creditors of the employer(s) or plan administrator, for the payment of benefits in accordance with the terms of the plan.
Plan Members	The individuals covered by the terms of a pension plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.
Present Value of Future Benefits (PVFB)	Projected benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members upon retirement) as a result of their service through the valuation date and their expected future service. The actuarial present value of projected future benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment (taking into account mortality, turnover, probability of participating in plan retirement, etc.). Alternatively, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay the projected benefits when due.