www.pwc.com

# Indiana Public Retirement System

Public Employees' Retirement Fund

Actuarial Valuation as of June 30, 2012





December 20, 2012

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 as of June 30, 2012

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, which were prepared as of June 30, 2012, are presented in individual valuation reports for each fund and were prepared 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 Board's funding policy and adopted actuarial assumptions. Contributions determined by the actuarial valuation become effective either twelve or eighteen months after the valuation date, depending on the applicable employer. For example, contribution rates determined by the June 30, 2012 actuarial valuation and adopted by the Board will become effective on either July 1, 2013 or January 1, 2014. 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 30-year period.
- 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.

No membership growth is anticipated in setting the contributions. This is consistent with GASB #25, which prohibits anticipating membership growth in determining the Annual Required Contribution ("ARC").

#### **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 decreased by 4.2% from the preceding year to 79.2%, primarily due to fiscal 2012 investment returns of 0.7% being below the actuarial assumed rate of 7.0%, delayed recognition of prior asset losses from fiscal 2009 in the Actuarial Value of Assets, a decrease in the discount rate from 7.0% to 6.75%, and an update to the mortality table assumption.

#### **Benefit Provisions**

The benefit provisions reflected in the valuation reports are those which were in effect at June 30, 2012, as set forth in the related Indiana statutes. None of the Plans had any material changes in benefit provisions since the 2011 valuation; however, a 13th Check was provided to retirees in PERF and EG&C in lieu of a Cost-of-Living Adjustment.



#### **Assets and Member Data**

The valuations were based on asset values of the trust funds and member census data as of June 30, 2012. 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, 2012 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. 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 as of June 30, 2012 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.

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,

Ms. Cindy Fraterrigo

Member, American Academy of Actuaries Fellow of the Society of Actuaries

Cindy Draturgo

Enrolled Actuary (No. 11-06229)

Mr. Sheldon Gamzon

Member, American Academy of Actuaries Fellow of the Society of Actuaries

Enrolled Actuary (No. 11-03238)

Mr. Brandon Robertson

Member, American Academy of Actuaries Associate of the Society of Actuaries

Enrolled Actuary (No. 11-07568)

# TABLE OF CONTENTS

I.	EXECUTIVE SUMMARY	1
II.	FUNDING	
	A. Development of Funded Status	10
	B. Unfunded Actuarial Accrued Liability Reconciliation	11
	C. Actuarial Accrued Liability Reconciliation	12
	D. Reconciliation of Market Value of Assets	13
	E. Reconciliation of Actuarial Value of Assets	14
	F. Allocation of Assets	15
	G. State – Contribution Rate	16
	H. Political Subdivisions – Aggregate Contribution Rate	17
	I. State – Unfunded Actuarial Accrued Liability Amortization Schedule	18
	J. Political Subdivisions – Unfunded Actuarial Accrued Liability Amortization Schedule	18
	K. History of Employer Contribution Rates	19
	L. Approximate Investment Return for Year Ending June 30, 2012	20
	M. Historical Investment Experience	20
	N. Interest Rate Sensitivity	21
III.	. ACCOUNTING	
	A. Assumptions and Methods Under GASB #25 and #27	22
	B. Membership Data	22
	C. Total PERF – Statement of Fiduciary Net Position	23
	D. Total PERF – Statement of Changes in Fiduciary Net Position	24
	E. Total PERF – Schedule of Funding Progress	25
	F. State – Schedule of Funding Progress	25
	G. Political Subdivisions – Schedule of Funding Progress	25
	H. Total PERF – Schedule of Employer Contributions	26
	I. State – Schedule of Employer Contributions	26
	J. Political Subdivisions – Schedule of Employer Contributions	26
	K. State – Development of Net Pension Obligation (NPO)	27
	L. Political Subdivisions – Development of Net Pension Obligation (NPO)	27
	M. State – Three-Year Trend Information	28
	N. Political Subdivisions – Three-Year Trend Information	28
	O. Solvency Test	29
IV.	CENSUS DATA	30
v.	ACTUARIAL ASSUMPTIONS AND METHODS	38
VI.	SUMMARY OF PLAN PROVISIONS	45
VII.	I. DEFINITIONS OF TECHNICAL TERMS	50

INPRS

#### 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 2014 (July 1, 2013 through June 30, 2014 for State members and January 1, 2014 through December 31, 2014 for Political Subdivision members), and certain financial statement disclosure information. The valuation was performed using census data for plan members as of June 30, 2012 provided by INPRS, asset information as of June 30, 2012 provided by INPRS, the actuarial assumptions and methods approved by the Board and summarized in Section V, and the plan provisions effective June 30, 2012 as summarized in Section VI.

#### **Contribution Rates**

The State employer contribution rate will increase from 9.7% to 11.2% starting July 1, 2013. This contribution rate is equal to the current year Actuarially Calculated Rate, rounded up to the next tenth of a percent. The actual dollar amount of employer cost will depend on the actual payroll during fiscal year 2014.

The Political Subdivisions employer contribution rate, after aggregating over all participating Political Subdivisions, will increase from 9.7% to 11.0% starting January 1, 2014. The contribution rate for each Political Subdivision is equal to the prior year Actual Rate increased by the lesser of 1.5%, or the amount needed to reach the Composite Rate (11.2% as of the June 30, 2012 valuation). The Composite Rate is the aggregate Actuarially Calculated Rate for all Political Subdivisions, rounded up to the next tenth of a percent. This approach will fully fund the Annual Required Contribution once all Political Subdivisions are contributing the Composite Rate. The actual dollar amount of employer cost will depend on the actual payroll during calendar year 2014.

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 and added 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 decreased from 80.5% at June 30, 2011 to 76.6% at June 30, 2012. The decrease is primarily due to the decrease in discount rate, updated mortality table and recognition of asset experience.

INPRS PwC

#### 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 0.7% during fiscal 2012. 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 (0.2%) on market value and 2.3% 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. No increase in monthly benefits was provided to retired members, disabled members, or beneficiaries at July 1, 2012. Instead, a "13th check" was paid to each member in pay status during September 2012. 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**

For the June 30, 2012 valuation, the Board approved the following assumption changes:

- The interest rate assumption was decreased from 7.0% to 6.75%.
- The interest rate on member ASA balances was decreased from 7.0% to 3.0%.
- The mortality table was changed 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.

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

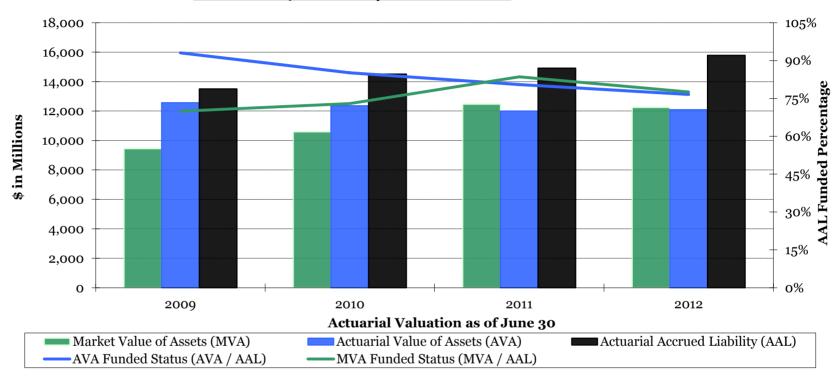
Other than the 13th check noted above, it is our understanding that there were no changes to the Plan or underlying status that impacted the pension benefits during the fiscal year.

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

There have been no changes in the actuarial methods since the June 30, 2011 valuation.

#### HISTORICAL SUMMARY

## Total PERF - 4 Year History of Funded Status 1



<b>Actuarial Valuation as of June 30:</b>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Actuarial Accrued Liability (AAL)	\$13,506.3	\$14,506.1	\$14,913.1	\$15,784.2
Actuarial Value of Assets (AVA)	12,569.3	12,357.2	12,000.6	12,088.2
Market Value of Assets (MVA)	9,442.3	10,581.3	12,461.4	12,243.8
Unfunded Liability (AAL - AVA)	937.0	2,148.9	2,912.5	3,696.0
AVA Funded Status (AVA / AAL)	93.1%	85.2%	80.5%	76.6%
MVA Funded Status (MVA / AAL)	69.9%	72.9%	83.6%	77.6%

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

#### **HISTORICAL SUMMARY (CONTINUED)**

# **Total PERF - Summary of Valuation Results** 1, 2

Valuation Date	June 30, 2009	June 30, 2010	June 30, 2011	June 30, 2012
Development of Actuarially Calculated Rate  Normal Cost (Beginning of Year)  Amortization of Unfunded Actuarial Accrued Liability	\$ 298,159,870 72,839,046	\$ 320,524,189 163,318,289	\$ 253,006,701 222,668,943	\$ 270,973,983 278,065,556
Total Contribution Amount Actuarially Calculated Rate	\$ 370,998,916 7.8%	\$ 483,842,478 9.9%	\$ 475,675,644 9.9%	\$ 549,039,539 11.2%
<u>Fiscal / Calendar Year</u>	 2011	 2012	 2013	2014
Approved Funding Rate <sup>3</sup>	7.6%	8.7%	9.7%	11.1%

 $<sup>^{\</sup>rm 1}$  Valuation results prior to June 30, 2010 were calculated by the prior actuary.

<sup>&</sup>lt;sup>2</sup> The contribution rates shown were developed on a <u>funding</u> basis only and do not reflect accounting requirements.

<sup>&</sup>lt;sup>3</sup> The Approved Funding Rate shown is the aggregate rate for the State and Political Subdivisions. The funding rates determined by the June 30, 2012 valuation become effective July 1, 2013 for the State rate and January 1, 2014 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.

## **HISTORICAL SUMMARY (CONTINUED)**

## State - Summary of Valuation Results 1, 2

<u>Valuation Date</u>	 June 30, 2009	 June 30, 2010	 June 30, 2011	 June 30, 2012
Development of Actuarially Calculated Rate				
Normal Cost (Beginning of Year)	\$ 103,491,300	\$ 110,142,867	\$ 73,614,164	\$ 78,888,474
Amortization of Unfunded Actuarial Accrued Liability	24,800,374	66,147,093	 84,263,994	105,132,459
Total Contribution Amount	\$ 128,291,674	\$ 176,289,960	\$ 157,878,158	\$ 184,020,933
Actuarially Calculated Rate	7.6%	10.2%	9.6%	11.2%
Fiscal Year	 2011	 2012	 2013	 2014
Approved Funding Rate <sup>3</sup>	7.0%	8.6%	9.7%	11.2%

## Political Subdivisions - Summary of Valuation Results 1,2

Valuation Date		June 30, 2009		June 30, 2010		June 30, 2011		June 30, 2012
Development of Actuarially Calculated Rate Normal Cost (Beginning of Year)	¢	194,668,570	\$	210,381,322	\$	179,392,537	\$	192,085,509
Amortization of Unfunded Actuarial Accrued Liability	Ψ	48,038,672	Ψ	97,171,196	Ψ	138,404,949	Ψ	172,933,097
Total Contribution Amount	\$	242,707,242	\$	307,552,518	\$	317,797,486	\$	365,018,606
Actuarially Calculated Rate		7.9%		9.7%		10.0%		11.2%
<u>Calendar Year</u>		2011		2012		2013		2014
Approved Funding Rate <sup>3</sup>		7.9%		8.8%		9.7%		11.0%

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

<sup>&</sup>lt;sup>2</sup> The contribution rates shown were developed on a <u>funding</u> basis only and do not reflect accounting requirements.

<sup>&</sup>lt;sup>3</sup> The Approved Funding Rate shown is the aggregate rate for Political Subdivisions. The funding rates determined by the June 30, 2012 valuation become effective July 1, 2013 for the State rate and January 1, 2014 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.

## HISTORICAL SUMMARY (CONTINUED)

## Total PERF - Summary of Valuation Results (Continued) 1

	J <sub>1</sub>	ıne 30, 2009	J	une 30, 2010	J	une 30, 2011	J	une 30, 2012
Census Information								
Active								
Number								
State		46,749		48,220		45,912		45,156
Political Subdivisions		101,043		101,657		102,021		100,363
Total		147,792		149,877		147,933		145,519
Average Age		47.3		47.5		47.6		47.6
Average Years of Service		10.9		11.2		11.4		11.5
Covered Payroll of Actives								
State		1,749,780,803		1,730,479,696		1,641,685,770		1,648,023,022
Political Subdivisions		3,181,642,137		3,165,532,884		3,177,087,910		3,256,029,392
Total	\$	4,931,422,940	\$	4,896,012,580	\$	4,818,773,680	\$	4,904,052,414
Inactive - Vested								
Number		10,670		14,759		20,933		21,423
Average Age				53.9		52.7		52.7
Average Years of Service				15.1		11.8		11.9
Inactive - Non-Vested								
Number				88,234		71,806		47,651
Retiree/Beneficiary/Disabled								
Number		65,099		67,166		70,380		72,992
Average Age				72.6		72.5		72.5
Annual Benefits Payable								
Pension				422,825,882		455,230,274		483,551,145
ASA Annuities				75,373,430		84,516,826		93,126,384
Total	\$	477,552,507	\$	498,199,312	\$	539,747,100	\$	576,677,529

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

# HISTORICAL SUMMARY (CONTINUED)

# Total PERF - Summary of Valuation Results (Continued) 1

	June 30, 2009		J	June 30, 2010		June 30, 2011		June 30, 2012	
Actuarial Accrued Liability (AAL)									
ASA Account Balance	\$	2,669,318,240	\$	2,780,570,388	\$	2,805,023,137	\$	2,749,448,762	
ASA Annuities - Retiree/Beneficiary/Disabled				710,683,223		801,369,029		908,664,881	
Pension - Retiree/Beneficiary/Disabled		4,611,256,619		4,220,908,907		4,569,417,231		4,987,114,328	
Pension - Active and Inactive									
State		2,443,039,325		2,678,030,588		2,538,861,413		2,660,671,538	
Political Subdivisions		3,782,666,167		4,115,859,095		4,198,476,483		4,478,340,402	
Total	\$	6,225,705,492	\$	6,793,889,683	\$	6,737,337,896	\$	7,139,011,940	
Total	\$	13,506,280,351	\$	14,506,052,201	\$	14,913,147,293	\$	15,784,239,911	
Actuarial Value of Assets (AVA)									
ASA Account Balance	\$	2,669,318,240	\$	2,780,570,388	\$	2,805,023,137	\$	2,749,448,762	
ASA Annuities - Retiree/Beneficiary/Disabled				710,683,223		801,369,029		908,664,881	
Pension - Retiree/Beneficiary/Disabled		4,611,256,619		4,220,908,907		4,569,417,231		4,987,114,328	
Pension - Active and Inactive		5,288,761,052		4,645,036,496		3,824,776,913		3,442,996,687	
Total	\$	12,569,335,911	\$	12,357,199,014	\$	12,000,586,310	\$	12,088,224,658	
Market Value of Assets (MVA)									
ASA Account Balance	\$	2,669,318,240	\$	2,780,570,388	\$	2,805,023,137	\$	2,749,448,762	
ASA Annuities - Retiree/Beneficiary/Disabled				710,683,223		801,369,029		908,664,881	
Pension - Retiree/Beneficiary/Disabled		4,611,256,619		4,220,908,907		4,569,417,231		4,987,114,328	
Pension - Active and Inactive		2,161,760,681		2,869,156,895		4,285,546,512		3,598,525,143	
Total	\$	9,442,335,540	\$	10,581,319,413	\$	12,461,355,909	\$	12,243,753,114	
Unfunded Actuarial Accrued Liability: AAL - AVA									
ASA Account Balance	\$	-	\$	-	\$	-	\$	-	
ASA Annuities - Retiree/Beneficiary/Disabled				-		-		-	
Pension - Retiree/Beneficiary/Disabled		-		-		-		-	
Pension - Active and Inactive		936,944,440		2,148,853,187		2,912,560,983		3,696,015,253	
Total	\$	936,944,440	\$	2,148,853,187	\$	2,912,560,983	\$	3,696,015,253	
Funded Percentage: AVA / AAL									
ASA Account Balance		100.0%		100.0%		100.0%		100.0%	
ASA Annuities - Retiree/Beneficiary/Disabled				100.0%		100.0%		100.0%	
Pension - Retiree/Beneficiary/Disabled		100.0%		100.0%		100.0%		100.0%	
Pension - Active and Inactive		85.0%		68.4%		56.8%		48.2%	
Total		93.1%		85.2%		80.5%		76.6%	
Summary of Assumptions									
Valuation Interest Rate		7.25%		7.0%		7.0%		6.75%	
Salary Scale		4.0%		4.0%		3.25% - 4.5%		3.25% - 4.5%	
Cost-of-Living Assumption		1.5%		1.0%		1.0%		1.0%	

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

# HISTORICAL SUMMARY (CONTINUED)

# State - Summary of Valuation Results (Continued) 1

	J	June 30, 2009 June 30		June 30, 2010	June 30, 2011		June 30, 2012	
Actuarial Accrued Liability (AAL)								
ASA Account Balance	\$	889,772,747	\$	926,856,796	\$	935,007,712	\$	916,482,921
ASA Annuities - Retiree/Beneficiary/Disabled				236,894,408		267,123,010		302,888,294
Pension - Retiree/Beneficiary/Disabled		1,537,085,539		1,406,969,635		1,523,139,077		1,662,371,442
Pension - Active and Inactive		2,443,039,325		2,678,030,588		2,538,861,413	1	2,660,671,538
Total	\$	4,869,897,611	\$	5,248,751,427	\$	5,264,131,212	\$	5,542,414,195
Actuarial Value of Assets (AVA)								
ASA Account Balance	\$	889,772,747	\$	926,856,796	\$	935,007,712	\$	916,482,921
ASA Annuities - Retiree/Beneficiary/Disabled				236,894,408		267,123,010		302,888,294
Pension - Retiree/Beneficiary/Disabled		1,537,085,539		1,406,969,635		1,523,139,077		1,662,371,442
Pension - Active and Inactive		2,121,550,162		1,803,664,021		1,433,516,270		1,259,781,511
Total	\$	4,548,408,448	\$	4,374,384,859	\$	4,158,786,069	\$	4,141,524,168
Market Value of Assets (MVA)								
ASA Account Balance	\$	889,772,747	\$	926,856,796	\$	935,007,712	\$	916,482,921
ASA Annuities - Retiree/Beneficiary/Disabled				236,894,408		267,123,010		302,888,294
Pension - Retiree/Beneficiary/Disabled		1,537,085,539		1,406,969,635		1,523,139,077		1,662,371,442
Pension - Active and Inactive		867,175,446		1,114,091,367		1,606,211,496		1,316,688,878
Total	\$	3,294,033,732	\$	3,684,812,206	\$	4,331,481,295	\$	4,198,431,535
Unfunded Actuarial Accrued Liability: AAL - AVA								
ASA Account Balance	\$	-	\$	-	\$	-	\$	-
ASA Annuities - Retiree/Beneficiary/Disabled				-		-		-
Pension - Retiree/Beneficiary/Disabled		-		-		-		-
Pension - Active and Inactive		321,489,163		874,366,568		1,105,345,143		1,400,890,027
Total	\$	321,489,163	\$	874,366,568	\$	1,105,345,143	\$	1,400,890,027
Funded Percentage: AVA / AAL								
ASA Account Balance		100.0%		100.0%		100.0%		100.0%
ASA Annuities - Retiree/Beneficiary/Disabled				100.0%		100.0%		100.0%
Pension - Retiree/Beneficiary/Disabled		100.0%		100.0%		100.0%		100.0%
Pension - Active and Inactive		86.8%		67.4%		56.5%		47.3%
Total		93.4%		83.3%		79.0%		74.7%
Summary of Assumptions								
Valuation Interest Rate		7.25%		7.0%		7.0%		6.75%
Salary Scale		4.0%		4.0%		3.25% - 4.5%		3.25% - 4.5%
Cost-of-Living Assumption		1.5%		1.0%		1.0%		1.0%

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

# HISTORICAL SUMMARY (CONTINUED)

# Political Subdivisions - Summary of Valuation Results (Continued) 1

	<b>June 30, 2009</b>		June 30, 2010		June 30, 2011		June 30, 2012	
Actuarial Accrued Liability (AAL)		_		_		_		_
ASA Account Balance	\$	1,779,545,493	\$	1,853,713,592	\$	1,870,015,425	\$	1,832,965,841
ASA Annuities - Retiree/Beneficiary/Disabled				473,788,815		534,246,019		605,776,587
Pension - Retiree/Beneficiary/Disabled		3,074,171,080		2,813,939,272		3,046,278,154		3,324,742,886
Pension - Active and Inactive		3,782,666,167		4,115,859,095		4,198,476,483	-	4,478,340,402
Total	\$	8,636,382,740	\$	9,257,300,774	\$	9,649,016,081	\$	10,241,825,716
Actuarial Value of Assets (AVA)								
ASA Account Balance	\$	1,779,545,493	\$	1,853,713,592	\$	1,870,015,425	\$	1,832,965,841
ASA Annuities - Retiree/Beneficiary/Disabled				473,788,815		534,246,019		605,776,587
Pension - Retiree/Beneficiary/Disabled		3,074,171,080		2,813,939,272		3,046,278,154		3,324,742,886
Pension - Active and Inactive		3,167,210,890		2,841,372,476		2,391,260,643		2,183,215,176
Total	\$	8,020,927,463	\$	7,982,814,155	\$	7,841,800,241	\$	7,946,700,490
Market Value of Assets (MVA)								
ASA Account Balance	\$	1,779,545,493	\$	1,853,713,592	\$	1,870,015,425	\$	1,832,965,841
ASA Annuities - Retiree/Beneficiary/Disabled				473,788,815		534,246,019		605,776,587
Pension - Retiree/Beneficiary/Disabled		3,074,171,080		2,813,939,272		3,046,278,154		3,324,742,886
Pension - Active and Inactive		1,294,585,235		1,755,065,528		2,679,335,016		2,281,836,265
Total	\$	6,148,301,808	\$	6,896,507,207	\$	8,129,874,614	\$	8,045,321,579
Unfunded Actuarial Accrued Liability: AAL - AVA								
ASA Account Balance	\$	-	\$	-	\$	-	\$	-
ASA Annuities - Retiree/Beneficiary/Disabled				-		-		-
Pension - Retiree/Beneficiary/Disabled		-		-		-		-
Pension - Active and Inactive		615,455,277		1,274,486,619		1,807,215,840		2,295,125,226
Total	\$	615,455,277	\$	1,274,486,619	\$	1,807,215,840	\$	2,295,125,226
Funded Percentage: AVA / AAL								
ASA Account Balance		100.0%		100.0%		100.0%		100.0%
ASA Annuities - Retiree/Beneficiary/Disabled				100.0%		100.0%		100.0%
Pension - Retiree/Beneficiary/Disabled		100.0%		100.0%		100.0%		100.0%
Pension - Active and Inactive		83.7%		69.0%		57.0%		48.8%
Total		92.9%		86.2%		81.3%		77.6%
Summary of Assumptions								
Valuation Interest Rate		7.25%		7.0%		7.0%		6.75%
Salary Scale		4.0%		4.0%		3.25% - 4.5%		3.25% - 4.5%
Cost-of-Living Assumption		1.5%		1.0%		1.0%		1.0%

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

## **FUNDING**

	<u>Page</u>
A. Development of Funded Status	10
B. Unfunded Actuarial Accrued Liability Reconciliation	11
C. Actuarial Accrued Liability Reconciliation	12
D. Reconciliation of Market Value of Assets	13
E. Reconciliation of Actuarial Value of Assets	14
F. Allocation of Assets	15
G. State – Contribution Rate	16
H. Political Subdivisions – Aggregate Contribution Rate	17
I. State – Unfunded Actuarial Accrued Liability Amortization Schedule	18
J. Political Subdivisions – Unfunded Actuarial Accrued Liability Amortization Schedule	18
K. History of Employer Contribution Rates	19
L. Approximate Investment Return for Year Ending June 30, 2012	20
M. Historical Investment Experience	20
N. Interest Rate Sensitivity	21

INPRS PwC

# A. Development of Funded Status

			June 30, 2011			<b>June 30, 2012</b>		
1.	Act	uarial Accrued Liability		_				
	a.	Annuity Savings Account	\$	2,805,023,137	\$	2,749,448,762		
	b.	ASA Annuities		801,369,029		908,664,881		
	c.	Retirees, Beneficiaries, and Disableds		4,569,417,231		4,987,114,328		
	d.	Actives and Inactives		6,737,337,896		7,139,011,940		
	e.	Total: $(1)(a) + (1)(b) + (1)(c) + (1)(d)$	\$	14,913,147,293	\$	15,784,239,911		
2.	Act	uarial Value of Assets						
	a.	Annuity Savings Account	\$	2,805,023,137	\$	2,749,448,762		
	b.	ASA Annuities		801,369,029		908,664,881		
	c.	Retirees, Beneficiaries, and Disableds		4,569,417,231		4,987,114,328		
	d.	Actives and Inactives		3,824,776,913		3,442,996,687		
	e.	Total: $(2)(a) + (2)(b) + (2)(c) + (2)(d)$	\$	12,000,586,310	\$	12,088,224,658		
3.	Un	funded Actuarial Accrued Liability						
	a.	Annuity Savings Account: (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)		2,912,560,983		3,696,015,253		
	e.	Total: (1)(e) - (2)(e)	\$	2,912,560,983	\$	3,696,015,253		
4.	Fur	nded Status						
	a.	Annuity Savings Account: (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)		56.8%		48.2%		
	e.	Total: (2)(e) / (1)(e)		80.5%		76.6%		

## B. Unfunded Actuarial Accrued Liability Reconciliation

			J	une 30, 2011	<b>June 30, 2012</b>			
1.	Un	funded Actuarial Accrued Liability, Prior Year	\$	2,148,853,187	\$	2,912,560,983		
2.	Un	funded Actuarial Accrued Liability (Gain) / Loss						
	a.	Actuarial Value of Assets Experience	\$	1,000,631,406	\$	486,424,398		
	b.	Actuarial Accrued Liability Experience		82,616,614		(87,830,844)		
	c.	Additional Liability Due to Cost-of-living Adjustments		-		$(14,135,011)^{1}$		
	d.	Additional Liability Due to Changes in Actuarial Assumptions		(295,209,380)		433,372,227 2		
	e.	Additional Liability Due to Changes in Plan Provisions				<u>-</u>		
	f.	Total New Amortization Bases:	\$	788,038,640	\$	817,830,770		
		(2)(a) + (2)(b) + (2)(c) + 2(d) + (2)(e)						
	g.	Reduction in Existing Bases Due to Prior Year Amortization, Net of Interest		(24,330,844)		(34,376,500)		
	h.	Change in Unfunded Actuarial Accrued Liability:	\$	763,707,796	\$	783,454,270		
		(2)(f) + (2)(g)						
3.	Un	funded Actuarial Accrued Liability, Current Year: (1) + (2)(h)	\$	2,912,560,983	\$	3,696,015,253		

**INPRS** 

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

<sup>&</sup>lt;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.

## C. Actuarial Accrued Liability Reconciliation

1.	June 30, 2011 Actuarial Accrued Liability	\$ 14,913,147,293	
2.	Normal Cost	253,006,701	
3.	Actual Benefit Payments	748,745,154	
4.	Interest of 7.0% on $(1) + (2) - (3)/2$	 1,035,424,699	
5.	Expected June 30, 2012 Actuarial Accrued Liability:	\$ 15,452,833,539	
	(1) + (2) - (3) + (4)		
		Dollar Change	Percent Change
		 in Liability	in Liability
6.	(Gain)/Loss Components		
	a. Census	\$ (87,830,844)	(0.6%)
	b. Cost-of-Living Adjustment <sup>1</sup>	(14,135,011)	(0.1%)
	c. Assumption Changes <sup>2</sup>	 433,372,227	2.8%
	d. Total: $(6)(a) + (6)(b) + (6)(c)$	\$ 331,406,372	2.1%
7.	Actual June 30, 2012 Actuarial Accrued Liability: (5) + (6)(d)	\$ 15,784,239,911	

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

<sup>&</sup>lt;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.

# D. Reconciliation of Market Value of Assets

			June 30, 2011	<b>June 30, 2012</b>		
1.	Market Value of Assets, Prior June 30	\$	10,581,319,413	\$	12,461,355,909	
2.	Receipts					
	a. Employer Contributions	\$	342,778,706	\$	397,842,387	
	b. Member Contributions		156,027,588		158,695,936	
	c. Investment Income and Dividends Net of Fees		2,105,673,340		(7,433,198)	
	d. Security Lending Income Net of Fees		6,417,025		3,481,283	
	e. Transfers In		5,299,445		3,341,006	
	f. Miscellaneous Receipts		18,134		8,009	
	g. Total Receipts: $(2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f)$	\$	2,616,214,238	\$	555,935,423	
3.	Disbursements					
	a. Benefits Paid During the Year	\$	638,460,412	\$	669,181,018	
	b. Refund of Contributions and Interest		65,178,251		69,880,200	
	c. Administrative and Project Expenses		22,461,145		24,793,064	
	d. Transfers Out		10,077,934		9,683,936	
	e. Miscellaneous Disbursements		_			
	f. Total Disbursements: $(3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e)$	\$	736,177,742	\$	773,538,218	
4.	Market Value of Assets, Current June 30: $(1) + (2)(g) - (3)(f)$	\$	12,461,355,909	\$	12,243,753,114	
5.	Market Value of Assets Approximate Annual Rate of Investment Return		19.9%		(0.2%)	

# E. Reconciliation of Actuarial Value of Assets

1.	Market Value of Assets, June 30, 2011	\$ 12,461,355,909
2.	Market Value of Assets, June 30, 2012	12,243,753,114
3.	Expected Earnings/Expenses  a. Expected Investment Earnings at 7.0% on June 30, 2011 Market Value  b. Receipts and Expected Investment Earnings at 7.0%  c. Disbursements and Expected Investment Expenses at 7.0%	872,294,914 579,483,395 774,951,234
4.	Expected Assets, June 30, 2012: (1) + (3)(a) + (3)(b) - (3)(c)	\$ 13,138,182,984
5.	2011-2012 Gain/(Loss): (2) - (4)	(894,429,870)
6.	Smoothing of Gain/(Loss)  Year Gain/(Loss) % Unrecognized	
	a. 2011-2012 \$ (894,429,870) 75%	(670,822,403)
	b. 2010-2011 \$ 1,356,272,606 50%	678,136,303
	c. 2009-2010 \$ 592,858,223 25%	148,214,556
7.	Preliminary Actuarial Value of Assets, June 30, 2012: (2) - (6)(a) - (6)(b) - (6)(c)	\$ 12,088,224,658
8.	Corridor	11 (00 -00 -00
	a. 120% of Market Value	14,692,503,737
	b. 80% of Market Value	9,795,002,491
9.	Actuarial Value of Assets, June 30, 2012	\$ 12,088,224,658
10.	Actuarial Value of Assets as a Percent of Market Value: (9) / (2)	98.7%
11.	Actuarial Value of Assets Approximate Annual Rate of Investment Return	2.3%

# F. Allocation of Assets

		June 30, 2011		June 30, 2012	
1.	Total Assets Available for Benefit				
	a. Market Value of Assets	\$	12,461,355,909	\$	12,243,753,114
	b. Actuarial Value of Assets		12,000,586,310		12,088,224,658
2.	Annuity Savings Accounts		2,805,023,137		2,749,448,762
3.	Assets for Retirees, Beneficiaries, and Disabled Members, including ASA Annuities	5			
	a. Retirees, Beneficiaries, and Disabled	\$	4,569,417,231	\$	4,987,114,328
	b. ASA Annuities		801,369,029		908,664,881
	c. Total	\$	5,370,786,260	\$	5,895,779,209
4.	Total Non-Retired Assets				
	a. Market Value of Assets: (1)(a) - (2) - (3)(c)	\$	4,285,546,512	\$	3,598,525,143
	b. Actuarial Value of Assets: (1)(b) - (2) - (3)(c)	\$	3,824,776,913	\$	3,442,996,687
5.	Total Ledger Assets	\$	4,605,663,347	\$	4,102,924,848
	a. State Amount	\$	1,726,190,439	\$	1,501,247,122
	b. State Percent		37.5%		36.6%
	c. Political Subdivisions Amount	\$	2,879,472,908	\$	2,601,677,726
	d. Political Subdivisions Percent		62.5%		63.4%
6.	State Allocation				
	a. Market Value of Assets: (4)(a) x (5)(b)	\$	1,606,211,496	\$	1,316,688,878
	b. Actuarial Value of Assets: (4)(b) x (5)(b)	\$	1,433,516,270	\$	1,259,781,511
7.	Political Subdivisions Allocation				
	a. Market Value of Assets: (4)(a) x (5)(d)	\$	2,679,335,016	\$	2,281,836,265
	b. Actuarial Value of Assets: (4)(b) x (5)(d)	\$	2,391,260,643	\$	2,183,215,176

## **G. State - Contribution Rate**

		J	une 30, 2011	<u>J</u>	une 30, 2012
Develop	oment of Annual Required Contribution:				
1.	Current Payroll	\$	1,641,685,770	\$	1,648,023,022
2.	Normal Cost (Beginning of Year)				
	a. Amount	\$	73,614,164	\$	78,888,474
	b. Percentage of Payroll		4.49%		4.79%
3.	Unfunded Actuarial Accrued Liability (UAAL) Annual Amortizations				
	a. Amount	\$	84,263,994	\$	105,132,459
	b. Percentage of Payroll		5.13%		6.38%
4.	Annual Required Contribution Rate (Actuarially Calculated Rate, Before Smoothing): (2)(b) + (3)(b)		9.62%		11.17%
5.	Estimated Annual Required Contribution Amount				
	a. Fiscal Year Beginning		July 1, 2012		July 1, 2013
	b. Anticipated Payroll: (1) x [(1 + 4.0%)]	\$	1,707,353,201	\$	1,713,943,943
	c. Amount: (4) x (5)(b) <sup>1</sup>	\$	164,247,378	\$	191,447,538
Approv	ed Funding Rate: <sup>2</sup>		9.70%		11.20%

<sup>&</sup>lt;sup>1</sup> Since the State contribution rate becomes effective one year after the valuation date, the Annual Required Contribution Amount is estimated by assuming payroll will increase 4.0% per year and then applying the Annual Required Contribution Rate computed at the valuation date.

 $<sup>^{2}</sup>$  The Approved Funding Rate is based on Annual Required Contribution rate, rounded up to the next tenth of a percent.

## H. Political Subdivisions - Aggregate Contribution Rate

	 June 30, 2011	J	une 30, 2012
Development of Annual Required Contribution:			
1. Current Payroll	\$ 3,177,087,910	\$	3,256,029,392
2. Normal Cost (Beginning of Year)			
a. Amount	\$ 179,392,537	\$	192,085,509
b. Percentage of Payroll	5.64%		5.90%
3. Unfunded Actuarial Accrued Liability (UAAL) Annual Amortizations			
a. Amount	\$ 138,404,949	\$	172,933,097
b. Percentage of Payroll	4.36%		5.31%
4. Aggregate Annual Required Contribution Rate (Actuarially Calculated Rate, Before Smoothing):	10.00%		11.21%
5. Estimated Annual Required Contribution Amount			
a. Fiscal Year Beginning	January 1, 2013		January 1, 2014
b. Anticipated Payroll: (1) x [(1 + 4.0%)]^1.5	\$ 3,369,606,916	\$	3,453,331,941
c. Amount: (4) x (5)(b) <sup>1</sup>	\$ 336,960,692	\$	387,118,511
Approved Funding Rate: <sup>2</sup>	9.73%		11.03%

<sup>&</sup>lt;sup>1</sup> Since the Political Subdivision contribution rates becomes effective one and a half years after the valuation date, the Annual Required Contribution Amount is estimated by assuming payroll will increase 4.0% per year and then applying the Aggregate Annual Required Contribution Rate computed at the valuation date.

<sup>&</sup>lt;sup>2</sup> At the December 16, 2011 meeting, the Board adopted a policy to phase in a single contribution rate for all participating political subdivisions, effective with the June 30, 2011 valuation. The Approved Funding Rate for each political subdivision was set equal to the prior year Actual Rate, plus 1.50%, subject to a maximum rate of 11.2% (i.e. the "composite" rate).

# <u>Unfunded Actuarial Accrued Liability Amortization Schedule <sup>1</sup></u>

## I. State

	Date Base Established	Reason	 Remaining Unfunded	Remaining Period	A	amortization Amount
1.	6/30/2008	Fresh Start	\$ 42,315,297	26	\$	3,274,972
2.	6/30/2009	Actuarial Experience	268,257,730	27		20,471,745
3.	6/30/2010	Actuarial Experience and Changes in Actuarial Assumptions	543,980,061	28		40,977,084
4.	6/30/2011	Actuarial Experience and Changes in Actuarial Assumptions	238,003,741	29		17,714,135
5.	6/30/2012	Actuarial Experience and Changes in Actuarial Assumptions	308,333,198	30		22,694,523
	Total		\$ 1,400,890,027		\$	105,132,459

# J. Political Subdivisions

	Date Base		Remaining	Remaining	A	mortization	
	Established	Reason	 Unfunded	Period		Amount	
1.	6/30/2006	Fresh Start	\$ 215,044,910	24	\$	17,180,318	
2.	6/30/2007	Actuarial Experience and Changes in Actuarial Assumptions	4,311,715	25		338,826	
3.	6/30/2008	Actuarial Experience	44,717,228	26		3,460,869	
4.	6/30/2009	Actuarial Experience	328,522,232	27		25,070,753	
5.	6/30/2010	Actuarial Experience and Changes in Actuarial Assumptions	651,339,165	28		49,064,261	
6.	6/30/2011	Actuarial Experience and Changes in Actuarial Assumptions	541,692,404	29		40,317,066	
7.	6/30/2012	Actuarial Experience and Changes in Actuarial Assumptions	 509,497,572	30		37,501,004	
	Total		\$ 2,295,125,226		\$	172,933,097	

 $<sup>^{\</sup>rm 1}$  Valuation results prior to June 30, 2010 were calculated by the prior actuary.

# K. History of Employer Contribution Rates 1, 2

1. 2. 3. 4.

	State		Political Subdivi		
Valuation Date	Effective Date	Contribution Rate	Effective Date	Contribution Rate	Weighted Average
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%

 $<sup>^{\</sup>rm 1}$  Valuation results prior to June 30, 2010 were calculated by the prior actuary.

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

## L. Approximate Investment Return for Year Ending June 30, 2012

	Market Value of Assets	Act	uarial Value of Assets
1. Balance, beginning of year	\$ 12,461,355,909	\$	12,000,586,310
2. Balance, end of year	12,243,753,114		12,088,224,658
3. Total increase: (2) - (1)	(217,602,795)		87,638,348
4. Contributions and Transfers In	559,887,338		559,887,338
5. Benefit payments and Transfers Out	748,745,154		748,745,154
6. Net additions: (4) - (5)	(188,857,816)		(188,857,816)
7. Net investment increase: (3) - (6)	(28,744,979)		276,496,164
8. Average assets: $[(1) + (2) - (7)] / 2$	12,366,927,001		11,906,157,402
9. Approximate rate of return: $(7) / (8)^{1}$	(0.2%)		2.3%

## M. <u>Historical Investment Experience</u>

2. 1. 3. 4. Approximate Annual Rate of Investment Return **Actuarial Assumed** Year Ending June 30 Market Basis **Actuarial Basis Interest Rate** (2.1%)5.8% 7.25% 2001 3.1% (4.9%)7.25% 2002 3.5% 4.2% 7.25% 2003 16.2% 6.3% 7.25% 2004 9.2% 7.0% 7.25% 2005 10.4% 7.9% 7.25% 2006 17.7% 2007 10.4% 7.25% (8.3%)5.3% 2008 7.25% (21.1%) (0.9%)7.25% 2009 13.5% (0.7%)7.25% 2010 19.9% (1.2%) 7.0% 2011 (0.2%)2.3% 7.0% 2012

<sup>&</sup>lt;sup>1</sup> Net of expenses.

#### 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 changed the assumption for the June 30, 2012 valuation from 7.0% to 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, 2013 for State and January 1, 2014 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 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%)
Funded Status					
Actuarial Accrued Liability	17,032,412,879	16,182,000,738	15,784,239,911	14,690,000,331	14,035,035,928
Actuarial Value of Assets	12,088,224,658	12,088,224,658	12,088,224,658	12,088,224,658	12,088,224,658
Unfunded Actuarial Accrued Liability	\$4,944,188,221	\$4,093,776,080	\$3,696,015,253	\$2,601,775,673	\$1,946,811,270
Funded Ratio	71.0%	74.7%	76.6%	82.3%	86.1%
Annual Required Contribution Rate					
Normal Cost Percentage	6.70%	5.89%	5.53%	4.57%	4.04%
UAAL Amortization Percentage	7.04%	6.13%	5.67%	4.29%	3.38%
Annual Required Contribution Percentage	13.74%	12.02%	11.20%	8.87%	7.42%

## ACCOUNTING

	<u>Page</u>
A. Assumptions and Methods Under GASB #25 and #27	22
B. Membership Data	22
C. Total PERF – Statement of Fiduciary Net Position	23
D. Total PERF – Statement of Changes in Fiduciary Net Position	24
E. Total PERF – Schedule of Funding Progress	25
F. State – Schedule of Funding Progress	25
G. Political Subdivisions – Schedule of Funding Progress	25
H. Total PERF – Schedule of Employer Contributions	26
I. State – Schedule of Employer Contributions	26
J. Political Subdivisions – Schedule of Employer Contributions	26
K. State – Development of Net Pension Obligation (NPO)	27
L. Political Subdivisions – Development of Net Pension Obligation (NPO)	27
M. State – Three-Year Trend Information	28
N. Political Subdivisions – Three-Year Trend Information	28
O. Solvency Test	29

INPRS PwC

#### 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, 2012

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, 2012, the date of the latest actuarial valuation:

Retired members, beneficiaries and disabled members receiving benefits:	72,992
Terminated vested plan members entitled to but not yet receiving benefits:	21,423
Terminated non-vested plan members entitled to a refund of ASA balance:	47,651
Active Plan Members:	145,519
Total membership:	287,585

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

# C. Total PERF - Statement of Fiduciary Net Position

23

1.	Ass	ets	
	a.	Cash	\$ 11,501,124
	b.	Securities Lending Collateral	427,226,320
	c.	Receivables	
		i. Contributions Receivable	\$ 103,267,801
		ii. Miscellaneous Receivables	(409,923)
		iii. Investments Receivable	-
		iv. Interest and Dividends	-
		v. Due From Other Funds	4,767,546
		vi. Total Receivables	\$ 107,625,424
	d.	Total Investments	12,126,139,796
	e.	Net Capital Assets	9,068,654
	f.	Total Assets: $(1)(a) + (1)(b) + (1)(c)(vi) + (1)(d) + (1)(e)$	\$ 12,681,561,318
2.	Lial	bilities	
	a.	Accounts Payable	\$ 4,998,918
	b.	Retirement Benefits Payable	703,281
	c.	Salaries and Benefits Payable	2,115,852
	d.	Investments Payable	84,577
	e.	Securities Lending Obligations	427,226,320
	f.	Securities Sold Under Agreement to Repurchase	-
	g.	Due To Other Funds	2,679,256
	h.	Total Liabilities: $(2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) + (2)(g)$	\$ 437,808,204
3.	Net	Assets Held in Trust for Pension Benefits: (1)(f) - (2)(h)	\$ 12,243,753,114

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

# D. Total PERF - Statement of Changes in Fiduciary Net Position

1.	Net Assets as of June 30, 2011	\$ 12,461,355,909
2.	Revenue (Additions)	
	a. Contributions	
	i. Member Contributions	\$ 158,695,936
	ii. Employer Contributions	397,842,387
	iii. Other Contributions	-
	iv. Total Contributions	\$ 556,538,323
	b. Investment Income/Loss	
	i. Investment Income/Loss	\$ 43,178,869
	ii. Securities Lending Income	3,664,862
	iii. Securities Lending Expenses	(183,579)
	iv. Investment Expenses	 (50,612,067)
	v. Net Investment Income	\$ (3,951,915)
	c. Other Additions	
	i. Interfund Transfers	\$ 3,341,006
	ii. Miscellaneous Receipts	 8,009
	iii. Total Other Additions	\$ 3,349,015
	d. Total Revenue (Additions): $(2)(a)(iv) + (2)(b)(v) + (2)(c)(iii)$	\$ 555,935,423
3.	Expenses (Deductions)	
	a. Pension and Disability Benefits	\$ 669,181,018
	b. Death, Survivor, and Funeral Benefits	-
	c. Distributions of Contributions and Interest	69,880,200
	d. Interfund Transfers	9,683,936
	e. Pensions Relief Distributions	-
	f. Local Unit Withdrawals	-
	g. Administrative and Project Expenses	 24,793,064
	h. Total Expenses (Deductions): $(3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e) + (3)(f) + (3)(g)$	\$ 773,538,218
4.	Changes in Net Assets Held in Trust for Pension Benefits: (2)(d) - (3)(h)	\$ (217,602,795)
5.	Net Assets as of June 30, 2012: (1) + (4)	\$ 12,243,753,114

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

## E. Total PERF - Schedule of Funding Progress 1

1. Actuarial	2.	3.	4.	5.	6.	7.
Valuation	Actuarial	Actuarial Accrued	Unfunded Actuarial	Funded	Current	UAAL as a
Date June 30	Value of Assets	Liability (AAL)	Accrued Liability (UAAL)	Ratio	Payroll	% of Payroll
			(3) - (2)	(2) / (3)	,	(4) / (6)
2007	12,220,934,214	12,439,798,183	218,863,969	98.2%	4,385,675,869	5.0%
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%
		F.	State – Schedule of Funding	Progress 1, 2		
1. Astronial	2.	3.	4.	5.	6.	7.
Actuarial Valuation	Actuarial	Actuarial Accrued	Unfunded Actuarial	AAL Funded	Current	UAAL as a
Date June 30	Value of Assets	Liability (AAL)	Accrued Liability (UAAL)	Ratio	Payroll	% of Payroll
Date June 30	value of Assets	Liability (AAL)	(3) - (2)	(2) / (3)	1 ayron	$\frac{\frac{76011 \text{ ayron}}{(4)/(6)}$
2007	4,588,840,682	4,573,270,312	(15,570,370)	100.3%	1,573,566,285	(1.0%)
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%
		G. <u>Political</u>	l Subdivisions – Schedule of l	Funding Progress 1, 2		
1. Actuarial	2.	3.	4.	5.	6.	7.
Valuation	Actuarial	Actuarial Accrued	<b>Unfunded Actuarial</b>	AAL Funded	Current	UAAL as a
Date June 30	Value of Assets	Liability (AAL)	Accrued Liability (UAAL)	Ratio	Payroll	% of Payroll
			(3) - (2)	(2) / (3)		(4) / (6)
2007	7,632,093,532	7,866,527,871	234,434,339	97.0%	2,812,109,584	8.3%
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%

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

<sup>&</sup>lt;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.

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

# H. Total PERF - Schedule of Employer Contributions 1

1.	2.	3⋅	4.
Plan Year Ending	Annual Required	Actual	
June 30	Contribution (ARC)	Employer Contribution	% of ARC
			(3)/(2)
2007	275,170,690	260,150,203	94.5%
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%

# I. State - Schedule of Employer Contributions 1

1.	2.	3⋅	4.
Plan Year Ending	Annual Required	Actual	
June 30	Contribution (ARC)	Employer Contribution	% of ARC
			(3)/(2)
2007	96,430,158	89,800,501	93.1%
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%

## J. Political Subdivisions - Schedule of Employer Contributions <sup>1</sup>

1. Plan Year Ending June 30	2. Annual Required Contribution (ARC)	3. Actual Employer Contribution	4. % of ARC
<u> </u>	Contribution (ARC)	Employer Contribution	(3) / (2)
2007	178,740,532	170,349,702	95.3%
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%

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

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

# K. State - Development of Net Pension Obligation (NPO) 1

1.	2.	3⋅	4.	5.	6.	7.	8.	9.	10.
Plan Year	Annual	Interest				Actual		NPO at	
Ending	Required	on NPO at	ARC	Amortization	<b>Net Pension</b>	Employer	Change	Beginning	NPO at
June 30	Contribution (ARC)	Discount Rate	Adjustment	Factor	Cost (NPC)	Contribution	in NPO	of Year	End of Year
					·	·	· ·	· · · · · · · · · · · · · · · · · · ·	
			(9) / (5)		(2) + (3) - (4)		(6) - (7)		(8) + (9)
2010	\$ 118,199,909	\$ (4,579,156)	(9) / (5) \$ (5,218,303)	12.1037	(2) + (3) - (4) \$ 118,839,056	\$ 111,554,875	(6) - (7) \$ 7,284,181	\$ (63,160,773)	(8) + (9) \$ (55,876,592)
2010 2011	\$ 118,199,909 \$ 176,289,960	\$ (4,579,156) \$ (3,911,361)		12.1037 12.4090		\$ 111,554,875 \$ 115,232,212		\$ (63,160,773) \$ (55,876,592)	

# L. Political Subdivisions - Development of Net Pension Obligation (NPO) 1

1.	2.	3.	4.	5∙	6.	7.	8.	9.	10.	11.
Plan Year	Annual	Interest				Actual	Adjustment		NPO at	
Ending	Required	on NPO at	ARC	Amortization	Net Pension	Employer	for Withdrawn and	Change	Beginning	NPO at
June 30	Contribution (ARC)	Discount Rate	Adjustment	Factor	Cost (NPC)	Contribution	Merged Units <sup>2</sup>	in NPO	of Year	End of Year
			(10) / (5)		(2) + (3) - (4)			(6) - (7) + (8)		(9) + (10)
2010	\$ 241,983,391	\$ (7,933,405)	\$ (9,040,729)	12.1037	\$ 243,090,715	\$ 219,534,715	\$ 1,440,767	\$ 24,996,767	\$ (109,426,271)	(84,429,504)
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

<sup>&</sup>lt;sup>1</sup> NPO at the beginning of the 2010 plan year was determined by the prior actuary.

<sup>&</sup>lt;sup>2</sup> Individual Political Subdivisions can withdraw from the plan or merge with other Political Subdivisions which prevents the NPO from reconciling year over year.

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

# M. State - Three-Year Trend Information

1.	2.	3.	4.
Plan Year		Actual	
Ending	<b>Net Pension</b>	Employer	
June 30	Cost (NPC)	Contribution	% of NPC
			(3) / (2)
2010	118,839,056	111,554,875	93.9%
2011	176,881,508	115,232,212	65.1%
2012	183,328,202	138,327,474	75.5%

## N. Political Subdivisions - Three-Year Trend Information

1.	2.	3.	4.
Plan Year		Actual	
Ending	Net Pension	Employer	
June 30	Cost (NPC)	Contribution	% of NPC
			(3)/(2)
2010	243,090,715	219,534,715	90.3%
2011	308,446,346	227,546,494	73.8%
2012	326,375,355	259,514,913	79.5%

O. <u>Solvency Test</u>

Portion of Actuarial Liability Provided by Assets

1.	2.	3.	4.	5.	6.
		m .: 1 1	Non-Retired	Total Actuarial	
As of	ASA	Retired and	Members (Employer	Accrued	Actuarial Value
June 30	Balances	Beneficiaries	Financed Portion)	Liabilities	of Assets
2007	2,707,176,269	4,007,389,159	5,725,232,755	12,439,798,183	12,220,934,214
	100.0%	100.0%	96.2%	98.2%	
2008	2,694,331,410	4,227,365,567	6,181,524,200	13,103,221,177	12,780,116,052
	100.0%	100.0%	94.8%	97.5%	
2009	2,669,318,240	4,611,256,619	6,225,705,492	13,506,280,351	12,569,335,911
	100.0%	100.0%	85.0%	93.1%	
2010	2,780,570,388	4,931,592,130	6,793,889,683	14,506,052,201	12,357,199,014
	100.0%	100.0%	68.4%	85.2%	
2011	2,805,023,137	5,370,786,260	6,737,337,896	14,913,147,293	12,000,586,310
	100.0%	100.0%	56.8%	80.5%	
2012	2,749,448,762	5,895,779,209	7,139,011,940	15,784,239,911	12,088,224,658
	100.0%	100.0%	48.2%	76.6%	

 $<sup>^{\</sup>rm 1}$  Valuation results prior to June 30, 2010 were calculated by the prior actuary.

# SECTION IV - CENSUS DATA

#### **CENSUS DATA**

	Page
A. Reconciliation of Participant Data	30
B. Census Information	31
C. Schedule of Active Member Valuation Data	32
D. Schedule of Retirees, Beneficiaries, and Disabled Members	33
E. Distribution of Active Members by Age and Service	34
F. Distribution of Inactive Vested Members by Age and Service	35
G. Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired	36
H. Schedule of Benefit Recipients by Type of Benefit Option	37
I. Schedule of Average Benefit Payments as of June 30, 2012	37

INPRS PwC

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

Inactive Non-Vested

	Actives	ASA Balance	Inactive Vested	Inactive Deceased <sup>2</sup>	Disabled	Retired	Beneficiary	Total
Total as of June 30, 2011	147,933	70,446	20,634	1,659	4,655	57,155	8,570	311,052
New Entrants	13,925	-	-	-	-	-	-	13,925
Rehires	1,655	(1,313)	(342)	-	-	-	-	-
Non-Vested Terminations	(8,278)	8,287	(9)	-	-	-	-	-
Vested Terminations	(2,392)	(317)	2,710	(1)	-	-	-	-
Retirements	(3,276)	(52)	(927)	0	(4)	4,260	(1)	-
Disablements	(188)	(22)	(80)	0	319	(29)	0	-
Death with Beneficiary	(51)	(2)	(10)	(48)	(78)	(495)	684	-
Death - Entitled to ASA and/or Pension Benefits	(138)	(144)	(20)	302	-	-	-	-
Death without Beneficiary	(6)	-	-	-	(135)	(1,526)	(469)	(2,136)
Refunds	(3,665)	(30,078)	(769)	(1,430)	-	(6)	(3)	(35,951)
Data Adjustments		587	13		29	35	31	695
Total as of June 30, 2012	145,519	47,392	21,200	482	4,786	59,394	8,812	287,585

<sup>&</sup>lt;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).

 $<sup>^{2}</sup>$  Inactive deceased counts include 223 members with vested benefits.

# B. Census Information 1

		<b>June 30, 2011</b>	June 30, 2012		
1.	Active				
	a. Number				
	i. State	45,912	45,156		
	ii. Political Subdivisions	102,021	100,363		
	iii. Total	147,933	145,519		
	b. Average Age	47.6	47.6		
	c. Average Years of Service	11.4	11.5		
	d. Covered Payroll of Actives				
	i. State	1,641,685,770	1,648,023,022		
	ii. Political Subdivisions	3,177,087,910	3,256,029,392		
	iii. Total	\$ 4,818,773,680	\$ 4,904,052,414		
2.	Inactive - Vested				
	a. Number	20,933	21,423		
	b Average Age	52.7	52.7		
	c. Average Years of Service	11.8	11.9		
3.	Inactive - Non-Vested				
	a. Number	71,806	47,651		
4.	Retiree/Beneficiary/Disabled				
	a. Number	70,380	72,992		
	b. Average Age	72.5	72.5		
	c. Annual Benefits Payable				
	i. Pension	455,230,274	483,551,145		
	ii. ASA Annuities	84,516,826	93,126,384		
	iii. Total				

<sup>&</sup>lt;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).

# C. Schedule of Active Member Valuation Data 1,2

1.	2.		3⋅	4.	5.
			Annual		Annual
As of	Active	Payroll		Average	Percent
June 30	Members	(\$ in Thousands)		Pay	Increase
				(3) / (2)	
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%

<sup>&</sup>lt;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.

# D. Schedule of Retirees, Beneficiaries, and Disabled Members 1,2,3

(\$ in Thousands)

1.	2.	3⋅	4.	5.	6.	7.	8.	9.
_	Ac	dded	Rer	noved	End of Year <sup>4</sup>			
		Annual		Annual		Annual	% Increase in	Average
Fiscal Year Ending		Allowances		Allowances		Allowances	Annual	Annual
June 30	Number	(\$ in Thousands)	Number	(\$ in Thousands)	Number	(\$ in Thousands)	Allowances	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

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

<sup>&</sup>lt;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.

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

Attained				Distribut	ion of Active Men	nbers by Age and	Service as of June	30, 2012			
Age	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	2,232	2,054	66	1	1						4,354
25-29	2,360	6,180	2,238	46							10,824
30-34	1,410	4,655	4,458	1,397	47						11,967
35-39	1,176	3,809	3,919	2,874	938	41	2				12,759
40-44	1,142	4,128	4,421	3,172	2,392	1,025	85	11	1		16,377
45-49	999	3,878	4,791	3,798	2,633	2,310	1,270	103	3	2	19,787
50-54	817	3,373	4,662	4,532	3,603	2,712	2,322	1,725	176	3	23,925
55-59	700	2,803	3,811	3,968	3,497	3,151	2,201	1,841	1,045	61	23,078
60-64	364	1,826	2,657	2,564	2,146	2,109	1,580	1,058	862	332	15,498
65-69	143	643	1,140	881	689	605	435	277	186	127	5,126
70&Up	43	282	475	389	286	155	71	50	47	26	1,824
Total	11,386	33,631	32,638	23,622	16,232	12,108	7,966	5,065	2,320	551	145,519

34

<sup>&</sup>lt;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).

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

Attained		Distr	ibution of Inactive	e Vested Member	s by Age and Serv	rice as of June 30	, 2012	
Age	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	Total
<25			2					2
25-29			2					2
30-34			342	5				347
35-39			1,119	282	9			1,410
40-44			1,445	929	253	6	2	2,635
45-49			1,722	843	512	127	14	3,218
50-54			2,133	1,273	625	321	117	4,469
55-59			2,267	1,390	734	344	197	4,932
60-64			2,157	679	358	157	164	3,515
65-69			362	158	87	35	57	699
70&Up			85	42	30	15	22	194
Total			11,636	5,601	2,608	1,005	573	21,423

<sup>&</sup>lt;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).

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

Attained	Distribution	of Retired Memb	ers, Beneficiaries	, and Disabled M	embers by Age an	d Number of Yea	rs Retired as of Ju	ine 30, 2012
Age	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	Total
<40	16	10	1					27
40-44	35	35	11		1			82
45-49	76	78	47	20	2			223
50-54	606	174	99	60	21	2		962
55-59	2,570	942	229	108	51	1		3,901
60-64	6,303	2,665	729	197	84	10	7	9,995
65-69	7,787	4,738	1,702	631	105	18	11	14,992
70-74	2,833	5,794	3,383	1,296	407	27	26	13,766
75-79	564	2,156	4,271	2,823	790	239	36	10,879
80-84	168	563	1,263	3,901	1,936	470	219	8,520
85-89	55	150	358	930	2,848	1,154	362	5,857
90&Up	9	44	77	184	537	1,695	1,242	3,788
Total	21,022	17,349	12,170	10,150	6,782	3,616	1,903	72,992

<sup>&</sup>lt;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).

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

Number of Benefit Recipients by Benefit Option as of June 30, 2012

		Number of Benefit Recipients by Benefit Option as of valie 30, 2012									
						_	Five Year		_	_	_
							Guaranteed				
	Five Year						Beneficiary				
	Guaranteed		Joint with Full	Joint with Two-	Joint with One-		Benefit with				
	Beneficiary	Benefit with No	Survivor	Thirds Survivor	Half Survivor	Integration with	ASA Cash	Benefit with No			
Amount of	Benefit (Option	Guarantee	Benefits (Option	Benefits (Option	Benefits (Option	Social Security	Refund (Option	Guarantee			
Monthly Benefit	10)	(Option 20)	30)	40)	50)	(Option 61)	71)	(Option 80)	Survivors	Disabled	Total
\$ 1-500	11,408	7,352	5,990	631	1,488	289	968	0	5,979	3,097	37,202
501 - 1,000	5,539	5,861	3,586	786	1,621	179	910	1	2,126	1,284	21,893
1,001 - 1,500	1,645	2,517	1,753	431	810	63	397	О	498	317	8,431
1,501 - 2,000	544	1,013	680	246	323	42	161	0	131	71	3,211
2,001 - 3,000	254	587	401	168	229	38	125	O	67	17	1,886
over 3,000	43	129	70	42	44	8	22	0	11	0	369
Total	19,433	17,459	12,480	2,304	4,515	619	2,583	1	8,812	4,786	72,992

# I. Schedule of Average Benefit Payments as of June 30, 2012

Years of Credited Service 0-4 5-9 10-14 15-19 20-24 25-29 30+ Total Average Monthly Defined Benefit \$ 103 \$ 170 \$ 265 \$ 363 \$ 504 \$ 701 \$ 1,139 \$ 555 Average Monthly ASA Annuity 37 \$ 43 \$ 89 \$ 116 \$ 171 \$ 233 \$ 407 \$ 188 Average Final Average Salary 26,362 \$ 21,011 \$ 21,993 \$ 24,513 \$ 26,534 \$ 29,347 \$ 36,331 \$ 27,306 **Number of Benefit Recipients** 516 2,007 12,369 19,361 15,258 10,589 12,892 72,992

37

PwC

<sup>&</sup>lt;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.

## ACTUARIAL ASSUMPTIONS AND METHODS

	Page
A. Actuarial Assumptions	38
B. Actuarial Methods	4:

INPRS PwC

# 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:

		Productivity,	
		Merit, and	Total Individual
Age	Inflation	Promotion	Salary growth
<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

# 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:

Age	Male	Female
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)				Service	)		
Earnings < \$20,000	Age	0	1	2	3	4	5+
	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)				Service	1		
Earnings >= \$20,000	Age	0	1	2	3	4	5+
	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)				Service	)		
Earnings < \$20,000	Age	0	1	2	3	4	5+
	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%

# A. Actuarial Assumptions (continued)

# Termination (continued)

State (Female)				Ser	vice		
Earnings >= \$20,000	Age	0	1	2	3	4	5+
	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)				Ser	vice		
Earnings < \$20,000	Age	0	1	2	3	4	5+
	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)				Ser	vice		
Earnings >= \$20,000	Age	0	1	2	3	4	5+
	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)				Ser	vice		
Earnings < \$20,000	Age	0	1	2	3	4	5+
	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%

40

## A. Actuarial Assumptions (continued)

### Termination (continued)

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

		Service				
Age	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:

	Service				
Age	10	15	20	30	31 +
50	0%	4%	4%	4%	4%
55	ο%	7%	7%	12%	7%
60	ο%	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.

#### A. Actuarial Assumptions (continued)

#### ASA Withdrawal

For active members who are expected to terminate prior to becoming vested (before 10 years of service), 100% of such members are assumed to withdraw their ASA balance immediately upon termination. For all other active members, 50% of such members are assumed to withdraw their ASA balance immediately upon termination and 50% of such members are assumed to annuitize their ASA balance upon commencement of their employer funded annuity benefit.

For inactive members who are not vested, 100% of such members are assumed to withdraw their ASA balance immediately. For inactive members who are vested, 50% of such members are assumed to withdraw their ASA balance immediately and 50% of such members are assumed to annuitize upon their ASA balance commencement of their employer funded annuity benefit.

The actual assumptions used to convert ASA balances to annuity forms of payment are different than the valuation assumptions. This results in the liability being slightly greater than the ASA balance for members assumed to annuitize their ASA.

#### **Data Assumptions**

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.

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.

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):

- For non-vested members, the ASA Balance is included in the valuation
- For vested members, the ASA Balance is included in the valuation if one of the following is true:
  - Date of death is more than 3 years before the valuation date
  - Age of the member is greater than or equal to 65 with less than 10 years of creditable service
  - Age of the member is less than or equal to 65 with less than 15 years of creditable service
- If neither of the items listed above are met, the ASA Balance and estimated pension annuity are included in the valuation.

#### Changes in Assumptions

For the June 30, 2012 valuation, the Board approved the following assumption changes:

- The interest rate assumption was decreased from 7.0% to 6.75%.
- The interest rate on member ASA balances was decreased from 7.0% to 3.0%.
- The mortality table was changed 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.

#### **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. Employer Funding Contribution Rate

The contribution rate approved for the State is equal to the Actuarially Calculated Rate for the State, rounded up to the next tenth of a percent. The Political Subdivision rates are now based on a composite rate migration, whereby the rate for each Political Subdivision is based on an increase of 1.5% over the previous year's Actual Rate, up to a maximum of 11.2% (i.e. the composite rate).

### **B.** Actuarial Methods (continued)

### 4. 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.

### 5. Changes in Actuarial Methods

There have been no changes in the actuarial methods since the June 30, 2011 valuation.

## **SUMMARY OF PLAN PROVISIONS**

	<u>Page</u>
Summary of Plan Provisions	45

INPRS PwC

### **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

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

### **Amount of Benefits**

a <b>.</b>	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 earnings¹ 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.

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.

### **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 refunded or used to provide the annuity benefit at retirement.

The benefits provided by the Annuity Savings Account are in addition to the benefits provided by employer contributions.

### **Optional Forms of Payment**

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.

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.

Benefits (Option 30)

Joint with Full Survivor Member will be paid a monthly benefit for life. After death, the same monthly benefit will be paid to the beneficiary for their lifetime.

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.

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.

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

### Optional Forms of Payment (Continued)

Security (Option 61)

Integration with Social 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.

5-Year Guaranteed **Beneficiary Benefit** (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 with ASA Cash Refund 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

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.

Combine ASA with Lifetime Pension Benefit

The member may choose to receive, as part of their monthly benefit, the total amount of their ASA. The member will not receive any other distribution from the ASA other than this monthly payment.

# **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.
Changes in Provisions	A "13th check" was paid to each member in pay status during September 2012. The amount of the 13th check varied based on the years of creditable service the member had earned prior to retirement.

# **Definitions of Technical Terms**

	<u>Pag</u>
Definitions of Technical Terms	50

INPRS PwC

#### **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** 

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 (AAL)

of the PVFB attributable to past service.

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, **Actuarial Assumptions** 

> 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.

A procedure for determining an actuarially equivalent allocation of the Present Value of Future Benefits to **Actuarial Cost Method** 

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.

The difference between actual unfunded Actuarial Accrued Liability and anticipated unfunded Actuarial Actuarial Gain/(Loss)

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.

### **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.

### **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.