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Indiana Public Retirement System

1977 Police Officers' and Firefighters' Pension and Disability Fund

Actuarial Valuation as of June 30, 2013

pwc

December 17, 2013

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

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

Dear Board of Trustees:

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

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

Financing Objectives and Funding Policy

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

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

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

Progress Toward Realization of Financing Objectives

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

Benefit Provisions

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

Assets and Member Data

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

Actuarial Assumptions and Methods

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

Certification

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

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

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

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

Respectfully submitted,

Cindy Fraterrigo	Sheldon A. Gamzon	Brandon A. Robertson
Ms. Cindy Fraterrigo	Mr. Sheldon Gamzon	Mr. Brandon Robertson
Member, American Academy of Actuaries	Member, American Academy of Actuaries	Member, American Academy of Actuaries
Fellow of the Society of Actuaries	Fellow of the Society of Actuaries	Associate of the Society of Actuaries
Enrolled Actuary (No. 11-06229)	Enrolled Actuary (No. 11-03238)	Enrolled Actuary (No. 11-07568)

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HIGHLIGHTS OF THE ACTUARY'S REPORT

This report presents the results of the actuarial valuation of the 1977 Police Officers' and Firefighters' Pension and Disability Fund (the "1977 Fund") and has been prepared to present the current funded status of the Plan, contribution requirements for calendar year 2015 (January 1, 2015 through December 31, 2015), and certain financial statement disclosure information. The valuation was performed using census data for plan members as of June 30, 2013 provided by INPRS, asset information as of June 30, 2013 provided by INPRS, the actuarial assumptions and methods approved by the Board and summarized in Section V, and the plan provisions effective June 30, 2013 as summarized in Section VI.

Contribution Rate

The Board sets, at its discretion, the applicable employer contribution rate upon considering the results of the actuarial valuation and other analysis as appropriate. The Board approved an employer contribution rate of 19.7% for calendar year 2015, the same as 2014. The contribution rate becomes effective on January 1, 2015. Therefore, the actual dollar amount of employer cost will depend on the actual payroll during calendar year 2015.

Members of the 1977 Fund contribute 6% of the compensation of a first class officer during their first 32 years of service. However, the employer may elect to "pick-up" all or part of the employee contribution. If a member terminates employment with less than 20 years of service, the accumulated contributions with interest can be withdrawn as a lump sum or the member may direct the 1977 Fund to make a direct rollover of the distribution amount. When a member becomes vested with at least 20 years of service, the member's account balance may not be refunded and is instead combined with the employer contributions in order to fund the member's future retirement annuity benefit.

Funded Status

The funded status of the 1977 Fund is measured by the funded ratio, which is the ratio of the assets available for benefits to a benefit liability measure for the 1977 Fund. While there are several such measures that could be appropriately used, the benefit liability measure that ties most closely to INPRS'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 1977 Fund AAL funded ratio increased from 91.9% at June 30, 2012 to 95.2% at June 30, 2013. The increase is primarily due to the recognition of investment gains from prior years in the AVA development and demographic gains.

Investment Experience

The assets of the 1977 Fund are commingled with the assets of other funds administered by INPRS. The overall INPRS return on the commingled funds was 6.0% during fiscal 2013. Based on the value of assets allocated to the 1977 Fund as of the prior valuation date and contribution and benefit payment activity during the year, the allocation of returns to the 1977 Fund represent a return of approximately 5.7% on market value and 8.3% 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.

HIGHLIGHTS OF THE ACTUARY'S REPORT (CONTINUED)

Cost-of-Living Adjustment

Benefits for retired members are increased annually based on increases in the CPI-U index. The increase is subject to a 3% maximum and 0% minimum. There was a 1.7% increase in monthly benefits provided to retired members, disabled members, and beneficiaries effective July 1, 2013. There was a 2.8% increase in monthly benefits provided to retired members, disabled members, and beneficiaries effective July 1, 2012.

Changes in Actuarial Assumptions

The interest crediting rate assumption on member contribution balances was lowered from 5.5% to 3.5%.

There were no other assumption changes for the June 30, 2013 valuation.

Changes in Plan Provisions

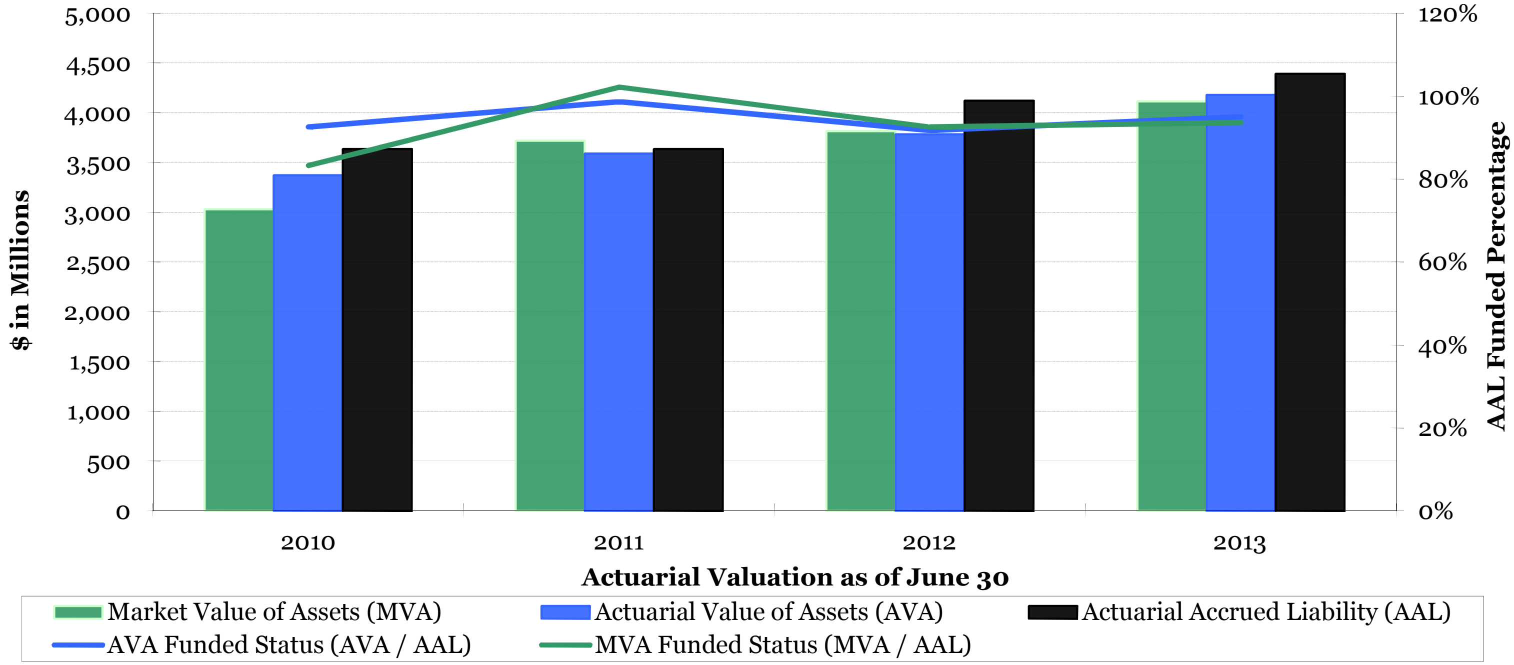
It is our understanding that there were no changes to the Plan that impacted the pension benefits during the fiscal year.

Changes in Actuarial Methods

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

HISTORICAL SUMMARY

1977 Fund – 4 Year History of Funded Status



Actuarial Valuation as of June 30:	**2010**	**2011**	**2012**	**2013**
Actuarial Accrued Liability (AAL)	$3,639.7	$3,639.0	$4,122.4	$4,392.9
Actuarial Value of Assets (AVA)	3,374.4	3,593.8	3,786.6	4,180.7
Market Value of Assets (MVA)	3,033.3	3,721.4	3,817.0	4,116.9
Unfunded Liability (AAL - AVA)	265.3	45.2	335.8	212.2
AVA Funded Status (AVA / AAL)	92.7%	98.8%	91.9%	95.2%
MVA Funded Status (MVA / AAL)	83.3%	102.3%	92.6%	93.7%

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results [1]

Valuation Date	June 30, 2010	June 30, 2011	June 30, 2012	June 30, 2013
Development of Annual Required Contribution Rate:				
1. Anticipated Payroll [2]	$ 675,797,434	$ 687,342,353	$ 697,111,339	$ 706,603,233
2. Normal Cost (Beginning of Year)				
a. Amount	$ 154,421,923	$ 123,438,234	$ 130,912,451	$ 133,074,656
b. Percentage of Payroll	22.85%	17.96%	18.78%	18.83%
3. Unfunded Actuarial Accrued Liability Annual Amortizations				
a. Amount	$ 20,029,260	$ 3,671,206	$ 25,053,170	$ 16,255,805
b. Percentage of Payroll	2.96%	0.53%	3.59%	2.30%
4. Expected Employee Contributions [3]				
a. Amount	$ 40,547,846	$ 40,582,006	$ 40,821,968	$ 40,636,183
b. Percentage of Payroll	6.00%	5.90%	5.85%	5.75%
5. Annual Required Contribution Rate:				
a. Percentage of Payroll: (2)(b) + (3)(b) - 4(b)	**19.81%**	**12.59%**	**16.52%**	**15.38%**
b. Effective Date	January 1, 2012	January 1, 2013	January 1, 2014	January 1, 2015

Calendar Year	2012	2013	2014	2015
Approved Funding Rate [4]	**19.70%**	**19.70%**	**19.70%**	**19.70%**

[1] The contribution rates shown were developed on a funding basis only and do not reflect acounting requirements

[2] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

[3] Only members with less than 32 years of service contribute to the plan. Current payroll for active members with less than 32 years of service as of June 30, 2013 is $677,269,709.

[4] The Approved Funding Rates shown are based on the first class officer payroll as of the respective valuation date.

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results (Continued)

	June 30, 2010	June 30, 2011	June 30, 2012	June 30, 2013
Census Information				
Active				
Number	13,362	13,376	13,390	13,287
Average Age	40.6	41.1	41.1	41.9
Average Years of Service	13.1	13.6	13.6	14.4
Covered Payroll of Actives [1]	$ 675,797,434	$ 687,342,353	$ 697,111,339	$ 706,603,233
Inactive - Vested				
Number	111	126	122	129
Average Age	49.8	50.2	50.1	49.9
Average Years of Service	22.3	22.8	22.4	22.6
Inactive - Non-Vested [2]				
Number	771	791	751	796
Retiree/Beneficiary/Disabled				
Number	2,782	2,966	3,208	3,491
Average Age	61.3	61.5	61.7	61.7
Annual Benefits Payable	$ 60,220,091	$ 68,178,739	$ 76,916,985	$ 87,301,272

[1] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

[2] For June 30, 2013, inactive non-vested members entitled to a refund of their member contribution balances totaling $6,733,809.

HISTORICAL SUMMARY (CONTINUED)

Summary of Valuation Results (Continued)

	June 30, 2010	June 30, 2011	June 30, 2012	June 30, 2013
Actuarial Accrued Liability (AAL)				
Member Contribution Balance	$ 634,864,721	$ 679,848,776	$ 728,891,808	$ 782,124,168
Retiree/Beneficiary/Disabled	859,626,595	970,676,496	1,135,537,898	1,288,456,658
Active and Inactive	2,145,177,957	1,988,431,007	2,258,006,406	2,322,366,151
Total	$ 3,639,669,273	$ 3,638,956,279	$ 4,122,436,112	$ 4,392,946,977
Actuarial Value of Assets (AVA)				
Member Contribution Balance	$ 634,864,721	$ 679,848,776	$ 728,891,808	$ 782,124,168
Retiree/Beneficiary/Disabled	859,626,595	970,676,496	1,135,537,898	1,288,456,658
Active and Inactive	1,879,946,523	1,943,261,593	1,922,164,986	2,110,122,792
Total	$ 3,374,437,839	$ 3,593,786,865	$ 3,786,594,692	$ 4,180,703,618
Market Value of Assets (MVA)				
Member Contribution Balance	$ 634,864,721	$ 679,848,776	$ 728,891,808	$ 782,124,168
Retiree/Beneficiary/Disabled	859,626,595	970,676,496	1,135,537,898	1,288,456,658
Active and Inactive	1,538,793,947	2,070,841,180	1,952,583,928	2,046,280,295
Total	$ 3,033,285,263	$ 3,721,366,452	$ 3,817,013,634	$ 4,116,861,121
Unfunded Actuarial Accrued Liability: AAL - AVA				
Member Contribution Balance	$ -	$ -	$ -	$ -
Retiree/Beneficiary/Disabled	-	-	-	-
Active and Inactive	265,231,434	45,169,414	335,841,420	212,243,359
Total	$ 265,231,434	$ 45,169,414	$ 335,841,420	$ 212,243,359
Funded Percentage				
Member Contribution Balance	100.0%	100.0%	100.0%	100.0%
Retiree/Beneficiary/Disabled	100.0%	100.0%	100.0%	100.0%
Active and Inactive	87.6%	97.7%	85.1%	90.9%
Total	92.7%	98.8%	91.9%	95.2%
Summary of Assumptions				
Valuation Interest Rate	7.0%	7.0%	6.75%	6.75%
Salary Scale	4.0%	3.25%	3.25%	3.25%
Cost-of-Living Assumption	2.25%	2.25%	2.25%	2.25%

FUNDING

A. Development of Funded Status

		June 30, 2012	June 30, 2013
1.	Actuarial Accrued Liability		
a.	Member Contribution Balances	728,891,808	782,124,168
b.	Retirees, Beneficiaries, and Disableds	1,135,537,898	1,288,456,658
c.	Actives and Inactives	2,258,006,406	2,322,366,151
d.	Total: (1)(a) + (1)(b) + (1)(c)	$ 4,122,436,112	$ 4,392,946,977
2.	Actuarial Value of Assets [1]		
a.	Member Contribution Balances	728,891,808	782,124,168
b.	Retirees, Beneficiaries, and Disableds	1,135,537,898	1,288,456,658
c.	Actives and Inactives	1,922,164,986	2,110,122,792
d.	Total: (2)(a) + (2)(b) + (2)(c)	$ 3,786,594,692	$ 4,180,703,618
3.	Unfunded Actuarial Accrued Liability [1]		
a.	Member Contribution Balances: (1)(a) - (2)(a)	-	-
b.	Retirees, Beneficiaries, and Disableds: (1)(b) - (2)(b)	-	-
c.	Actives and Inactives: (1)(c) - (2)(c)	335,841,420	212,243,359
d.	Total: (1)(d) - (2)(d)	$ 335,841,420	$ 212,243,359
4.	Funded Percentage [1]		
a.	Member Contribution Balances: (2)(a) / (1)(a)	100.0%	100.0%
b.	Retirees, Beneficiaries, and Disableds: (2)(b) / (1)(b)	100.0%	100.0%
c.	Actives and Inactives: (2)(c) / (1)(c)	85.1%	90.9%
d.	Total: (2)(d) / (1)(d)	91.9%	95.2%

[1] In determining the funded percentage, the assets are allocated first to member contribution balances, then to the retiree/beneficiary/disabled liability, and then to the active/inactive liability.

B. Unfunded Actuarial Accrued Liability Reconciliation

		June 30, 2012	June 30, 2013
1.	Unfunded Actuarial Accrued Liability, Prior Year	$ 45,169,414	$ 335,841,420
2.	Unfunded Actuarial Accrued Liability (Gain) / Loss		
	a. Actuarial Value of Assets Experience	$ 103,601,302	$ (75,191,747)
	b. Actuarial Accrued Liability Experience	544,029	(33,361,789)
	c. Additional Liability Due to Cost-of-living Adjustments	5,226,296 [1]	(6,159,321) [3]
	d. Additional Liability Due to Changes in Actuarial Assumptions	182,066,710 [2]	(4,810,241) [4]
	e. Additional Liability Due to Changes in Plan Provisions	-	-
	f. Total New Amortization Bases: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e)	$ 291,438,337	$ (119,523,098)
	g. Reduction in Existing Bases Due to Prior Year Contributions, Net of Interest	(766,331)	(4,074,963)
	h. Change in Unfunded Actuarial Accrued Liability: (2)(f) + (2)(g)	$ 290,672,006	$ (123,598,061)
3.	Unfunded Actuarial Accrued Liability, Current Year: (1) + (2)(h)	$ 335,841,420	$ 212,243,359

[1] A Cost-of-Living Adjustment (COLA) of 2.8% was effective as of July 1, 2012, rather than the assumed COLA of 2.25%.

[2] Assumption changes include the change in discount rate from 7.0% to 6.75% 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.

[3] A Cost-of-Living Adjustment (COLA) of 1.7% was effective as of July 1, 2013, rather than the assumed COLA of 2.25%.

[4] The interest crediting rate assumption on member contribution balances was lowered from 5.5% to 3.5%.

C. Actuarial Accrued Liability Reconciliation

1.	June 30, 2012 Actuarial Accrued Liability	$	4,122,436,112	
2.	Normal Cost		130,912,451	
3.	Actual Benefit Payments		99,802,915	
4.	Interest of 6.75% on (1) + (2) - (3)/2		283,732,680	
5.	Expected June 30, 2013 Actuarial Accrued Liability: (1) + (2) - (3) + (4)	$	4,437,278,328	
			Dollar Change in Liability	Percent Change in Liability
6.	(Gain)/Loss Components			
	a. Census	$	(33,361,789)	(0.8%)
	b. Cost-of-Living Adjustment [1]		(6,159,321)	(0.1%)
	c. Assumption Changes [2]		(4,810,241)	(0.1%)
	d. Total: (6)(a) + (6)(b) + (6)(c)	$	(44,331,351)	(1.0%)
7.	Actual June 30, 2013 Actuarial Accrued Liability: (5) + (6)(d)	**$**	**4,392,946,977**	

[1] A Cost-of-Living Adjustment (COLA) of 1.7% was effective as of July 1, 2013, rather than the assumed COLA of 2.25%.

[2] The interest crediting rate assumption on member contribution balances was lowered from 5.5% to 3.5%.

D. Reconciliation of Market Value of Assets

			June 30, 2012		June 30, 2013
1.	Market Value of Assets, Prior June 30	$	3,721,366,452	$	3,817,013,634
2.	Receipts				
	a. Employer Contributions	$	135,605,408	$	137,110,691
	b. Member Contributions		40,870,404		40,786,098
	c. Investment Income and Dividends Net of Fees		7,488,730		222,561,993
	d. Security Lending Income Net of Fees		1,261,257		947,682
	e. Transfers In		122,235		71,001
	f. Miscellaneous Income		41,557		17,995
	g. Total Receipts: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f)	$	185,389,591	$	401,495,460
3.	Disbursements				
	a. Benefits Paid During the Year	$	84,945,768	$	96,729,220
	b. Refund of Contributions and Interest		3,101,722		3,073,695
	c. Administrative and Project Expenses		1,662,166		1,845,058
	d. Transfers Out		32,753		-
	e. Miscellaneous Disbursements		-		-
	f. Total Disbursements: (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e)	$	89,742,409	$	101,647,973
4.	Market Value of Assets, Current June 30: (1) + (2)(g) - (3)(f)	**$**	**3,817,013,634**	**$**	**4,116,861,121**
5.	Market Value of Assets Approximate Annual Rate of Return [1]		0.2%		5.7%

[1] Assumes cash flows occur at mid-year.

E. Reconciliation of Actuarial Value of Assets

1.	Market Value of Assets, June 30, 2012				$	3,817,013,634
2.	Market Value of Assets, June 30, 2013					4,116,861,121
3.	Expected Earnings/Expenses					
	a. Expected Investment Earnings at 6.75% on June 30, 2012 Market Value					257,648,420
	b. Receipts with Expected Investment Earnings at 6.75%[1]					183,992,805
	c. Disbursements with Expected Investment Earnings at 6.75%[1]					103,171,263
4.	Expected Assets, June 30, 2013: (1) + (3)(a) + (3)(b) - (3)(c)				$	4,155,483,596
5.	2012-2013 Gain/(Loss): (2) - (4)					(38,622,475)
6.	Smoothing of Gain/(Loss)					
		Year	Gain/(Loss)	% Unrecognized		
	a.	2012-2013	$ (38,622,475)	75%		(28,966,856)
	b.	2011-2012	$ (256,507,408)	50%		(128,253,704)
	c.	2010-2011	$ 373,512,250	25%		93,378,063
7.	Preliminary Actuarial Value of Assets, June 30, 2013: (2) - (6)(a) - (6)(b) - (6)(c)				$	4,180,703,618
8.	Corridor					
	a. 120% of Market Value: 1.2 x (2)					4,940,233,345
	b. 80% of Market Value: 0.8 x (2)					3,293,488,897
9.	Actuarial Value of Assets, June 30, 2013: (7), but not greater than (8)(a) or less than (8)(b)				**$**	**4,180,703,618**
10.	Actuarial Value of Assets as a Percent of Market Value: (9) / (2)					101.6%
11.	Actuarial Value of Assets Approximate Annual Rate of Investment Return [1]					8.3%

[1] Assumes cash flows occur at mid-year.

F. Contribution Rate

	June 30, 2012	June 30, 2013
Development of Annual Required Contribution Rate:		
1. Anticipated Payroll [1]	$ 697,111,339	$ 706,603,233
2. Normal Cost (Beginning of Year)		
a. Amount	$ 130,912,451	$ 133,074,656
b. Percentage of Payroll	18.78%	18.83%
3. Unfunded Actuarial Accrued Liability (UAAL) Annual Amortizations		
a. Amount	$ 25,053,170	$ 16,255,805
b. Percentage of Payroll	3.59%	2.30%
4. Expected Employee Contributions [2]		
a. Amount	$ 40,821,968	$ 40,636,183
b. Percentage of Payroll	5.85%	5.75%
5. Annual Required Contribution Rate:		
a. Percentage of Payroll: (2)(b) + (3)(b) - 4(b)	**16.52%**	**15.38%**
b. Effective Date	January 1, 2014	January 1, 2015
Approved Funding Rate:	**19.70%**	**19.70%**
Expected Percentage of Annual Required Contribution Contributed:		
6. Fiscal Year Beginning	July 1, 2013	July 1, 2014
7. Annual Required Contribution Rates for:		
a. July 1 - December 31	0.00%	16.52%
b. January 1 - June 30	16.52%	15.38%
8. Approved Funding Rates for:		
a. July 1 - December 31	19.70%	19.70%
b. January 1 - June 30	19.70%	19.70%
9. Expected Percentage of Annual Required Contribution Contributed: {[(8)(a) + (8)(b)] / 2} / {[(7)(a) + (7)(b)] / 2}	238.50%	123.51%

[1] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

[2] Only members with less than 32 years of service contribute to the plan. Current payroll for active members with less than 32 years of service as of June 30, 2013 is $677,269,709.

G. Unfunded Actuarial Accrued Liability Amortization Schedule

	Date Base Established	Reason	Remaining Unfunded	Remaining Period	Amortization Amount
1.	6/30/2009	Actuarial Experience	$ 63,929,827	26	$ 4,947,819
2.	6/30/2010	Actuarial Experience and Changes in Actuarial Assumptions	191,954,296	27	14,648,746
3.	6/30/2011	Actuarial Experience and Changes in Actuarial Assumptions	(212,329,153)	28	(15,994,391)
4.	6/30/2012	Actuarial Experience and Changes in Actuarial Assumptions	288,211,487	29	21,450,996
5.	6/30/2013	Actuarial Experience and Changes in Actuarial Assumptions	(119,523,098)	30	(8,797,365)
	Total		$ 212,243,359		$ 16,255,805

H. History of Employer Contribution Rates [1, 2]

1. Valuation Date	2. Effective Date	3. Contribution Rate
December 31, 2000	July 1, 2002	21.0%
December 31, 2001	July 1, 2003	21.0%
December 31, 2002	July 1, 2004	21.0%
December 31, 2003	July 1, 2005	21.0%
December 31, 2004	July 1, 2006	21.0%
December 31, 2005	July 1, 2007	21.0%
December 31, 2006	July 1, 2008	19.5%
December 31, 2007	July 1, 2009	19.5%
December 31, 2008	July 1, 2010	19.5%
June 30, 2009	January 1, 2011	19.5%
June 30, 2010	January 1, 2012	19.7%
June 30, 2011	January 1, 2013	19.7%
June 30, 2012	January 1, 2014	19.7%
June 30, 2013	January 1, 2015	19.7%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] Prior to the June 30, 2011 valuation date, rates shown reflect application of the contribution rate smoothing rules.

I. Approximate Annual Rate of Return for Year Ending June 30, 2013[1]

		Market Value of Assets	Actuarial Value of Assets
1.	Balance, beginning of year	$ 3,817,013,634	$ 3,786,594,692
2.	Balance, end of year	4,116,861,121	4,180,703,618
3.	Total increase: (2) - (1)	299,847,487	394,108,926
4.	Contributions and Transfers In	177,985,785	177,985,785
5.	Benefit payments and Transfers Out	99,802,915	99,802,915
6.	Net additions: (4) - (5)	78,182,870	78,182,870
7.	Net investment increase: (3) - (6)	221,664,617	315,926,056
8.	Average assets: [(1) + (2) - (7)] / 2	3,856,105,069	3,825,686,127
9.	Approximate rate of return: (7) / (8)	5.7%	8.3%

J. Historical Investment Experience

1.	2.	3.	4.
	Actual Rate of Investment Return		Actuarial Assumed
Year Ending	Market Basis[2]	Actuarial Basis[1]	Interest Rate
December 31, 2003	24.2%	2.9%	7.25%
December 31, 2004	11.9%	4.9%	7.25%
December 31, 2005	7.8%	13.5%	7.25%
December 31, 2006	13.7%	15.5%	7.25%
December 31, 2007	6.3%	10.8%	7.25%
December 31, 2008	(30.8%)	(1.2%)	7.25%
June 30, 2009[3]	(20.6%)	0.2%	7.25%
June 30, 2010	13.9%	0.1%	7.25%
June 30, 2011	20.1%	3.5%	7.0%
June 30, 2012	0.7%	2.9%	7.0%
June 30, 2013	6.0%	8.3%	6.75%

[1] Based on individual fund experience. Net of expenses and assuming cash flows occur at mid-year.

[2] INPRS actual rate of return net of fees (2012-2013), 2004-2011 PERF CRIF rate of return reported as Gross of fees.

[3] Figures shown are for the six-month period from January 1, 2009 to June 30, 2009.

K. 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 last 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 Ratio and Annual Required Contribution (for the calendar year beginning January 1, 2015) are shown below at 6.75% (the current assumption), 6.0% (a three-fourths of a percent decrease), 6.5% (a one-fourth of a percent decrease), 7.5% (a three-fourths of a percent increase), and 8.0% (a one and one-fourth of a percent increase).

	0.75% Decrease: (6.0%)	0.25% Decrease: (6.5%)	Current Assumption: (6.75%)	0.75% Increase: (7.5%)	1.25% Increase: (8.0%)
Funded Status					
Actuarial Accrued Liability	$ 4,933,825,519	$ 4,563,651,603	$ 4,392,946,977	$ 3,931,611,126	$ 3,661,471,787
Actuarial Value of Assets	4,180,703,618	4,180,703,618	4,180,703,618	4,180,703,618	4,180,703,618
Unfunded Actuarial Accrued Liability	$ 753,121,901	$ 382,947,985	$ 212,243,359	$ (249,092,492)	$ (519,231,831)
Funded Ratio	84.7%	91.6%	95.2%	106.3%	114.2%
Annual Required Contribution Rate					
Normal Cost Percentage	22.91%	20.09%	18.83%	15.59%	13.80%
UAAL Amortization Percentage [1]	7.41%	3.99%	2.30%	0.00%	0.00%
Expected Employee Contribution Percentage	5.75%	5.75%	5.75%	5.75%	5.75%
Annual Required Contribution Percentage	24.57%	18.33%	15.38%	9.84%	8.05%

[1] Amortization bases were assumed to be eliminated in scenarios where the funded ratio exceeds 100%.

ACCOUNTING

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #25 AND #27

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

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

Valuation Date	June 30, 2013
Actuarial Cost Method	Entry Age Normal (Level Percent of Payroll)
Amortization Method	Level Dollar
Amortization Period	30 Years, Closed
Actuarial Value of Assets	4-Year Smoothed Market Value with 20% Corridor
Actuarial Assumptions:	
Investment Rate of Return	6.75%
Future Salary Increases	3.25% (includes 3.0% wage inflation)
Cost-of-Living Increases	2.25% compounded annually

B. Membership Data

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

Retired members, beneficiaries and disabled members receiving benefits:	3,491
Terminated vested plan members entitled to but not yet receiving benefits:	129
Terminated non-vested plan members entitled to a distribution of contributions:	796
Active Plan Members:	13,287
Total membership:	17,703

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

C. Statement of Fiduciary Net Position

1.	Assets				
	a.	Cash		$	1,277,183
	b.	Receivables			
		i.	Contributions Receivable	$	3,699,825
		ii.	Miscellaneous Receivables		64,755
		iii.	Investments Receivable		433,493,522
		iv.	Interest and Dividends		13,025,302
		v.	Due From Other Funds		59,079
		vi.	Total Receivables: (1)(b)(i) + (1)(b)(ii) + (1)(b)(iii) + (1)(b)(iv) + (1)(b)(v)	$	450,342,483
	c.	Total Investments			4,414,486,006
	d.	Net Capital Assets			339,539
	e.	Total Assets: (1)(a) + (1)(b)(vi) + (1)(c) + (1)(d)		$	4,866,445,211
2.	Liabilities				
	a.	Accounts Payable		$	61,901
	b.	Retirement Benefits Payable			7,136
	c.	Salaries and Benefits Payable			-
	d.	Investments Payable			509,622,554
	e.	Securities Lending Obligations			206,268,156
	f.	Securities Sold Under Agreement to Repurchase			33,028,922
	g.	Due To Other Funds			595,421
	h.	Total Liabilities: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) + (2)(g)		$	749,584,090
3.	Net Position Restricted for Pension Benefits: (1)(e) - (2)(h)			**$**	**4,116,861,121**

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

D. Statement of Changes in Fiduciary Net Position

1.	Net Position as of June 30, 2012			$	3,817,013,634
2.	Revenue (Additions)				
	a.	Contributions			
		i.	Member Contributions	$	40,786,098
		ii.	Employer Contributions		137,110,691
		iii.	Other Contributions		-
		iv.	Total Contributions: (2)(a)(i) + (2)(a)(ii) + (2)(a)(iii)	$	177,896,789
	b.	Investment Income/Loss			
		i.	Investment Income/Loss	$	246,484,619
		ii.	Securities Lending Income		1,114,630
		iii.	Securities Lending Expenses		(166,948)
		iv.	Other Investment Expenses		(23,922,626)
		v.	Net Investment Income: (2)(b)(i) + (2)(b)(ii) + (2)(b)(iii) + (2)(b)(iv)	$	223,509,675
	c.	Other Additions			
		i.	Interfund Transfers	$	71,001
		ii.	Miscellaneous Income		17,995
		iii.	Total Other Additions: (2)(c)(i) + 2(c)(ii)	$	88,996
	d.	Total Revenue (Additions): (2)(a)(iv) + (2)(b)(v) + (2)(c)(iii)		$	401,495,460
3.	Expenses (Deductions)				
	a.	Pension and Disability Benefits		$	95,934,820
	b.	Death, Survivor, and Funeral Benefits			794,400
	c.	Distributions of Contributions and Interest			3,073,695
	d.	Interfund Transfers			-
	e.	Pensions Relief Distributions			-
	f.	Local Unit Withdrawals			-
	g.	Administrative and Project Expenses			1,845,058
	h.	Total Expenses (Deductions): (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e) + (3)(f) + (3)(g)		$	101,647,973
4.	Changes in Net Position Restricted for Pension Benefits: (2)(d) - (3)(h)			$	299,847,487
5.	Net Position as of June 30, 2013: (1) + (4)			**$**	**4,116,861,121**

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

E. Schedule of Funding Progress [1]

1. Actuarial Valuation Date	2. Actuarial Value of Assets	3. Actuarial Accrued Liability (AAL)	4. Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	5. AAL Funded Ratio (2) / (3)	6. Current Payroll [2]	7. UAAL as a % of Payroll (4) / (6)
12/31/2006	$ 2,860,512,434	$ 2,649,525,233	$ (210,987,201)	108.0%	$ 557,644,472	(37.8%)
12/31/2007	3,281,480,077	2,889,294,926	(392,185,151)	113.6%	603,962,838	(64.9%)
12/31/2008	3,352,705,438	3,150,827,023	(201,878,415)	106.4%	644,936,101	(31.3%)
6/30/2009	3,265,597,574	3,332,685,533	67,087,959	98.0%	649,017,701	10.3%
6/30/2010	3,374,437,839	3,639,669,273	265,231,434	92.7%	675,797,434	39.2%
6/30/2011	3,593,786,865	3,638,956,279	45,169,414	98.8%	687,342,353	6.6%
6/30/2012	3,786,594,692	4,122,436,112	335,841,420	91.9%	697,111,339	48.2%
6/30/2013	4,180,703,618	4,392,946,977	212,243,359	95.2%	706,603,233	30.0%

F. Schedule of Employer Contributions [1]

1. Year Ending	2. Annual Required Contribution (ARC) [3]	3. Actual Employer Contribution	4. % of ARC (3) / (2)
12/31/2006	$ 102,964,243	$ 143,271,720	139.1%
12/31/2007	108,741,000	122,711,636	112.8%
12/31/2008	117,772,753	133,195,793	113.1%
6/30/2009	62,881,270 [4]	64,285,337	102.2%
6/30/2010	126,558,452	130,774,507	103.3%
6/30/2011	133,903,337	133,726,466	99.9%
6/30/2012	141,987,798	135,605,408	95.5%
6/30/2013	88,287,288	137,110,691	155.3%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

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

[4] Equal to one-half of the annual cost determined as of December 31, 2008.

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

G. Development of Net Pension Obligation (NPO)

1. Year Ending	2. Annual Required Contribution (ARC)	3. Interest on NPO at Discount Rate	4. ARC Adjustment	5. Amortization Factor	6. Net Pension Cost (NPC)	7. Actual Employer Contribution	8. Change in NPO	9. NPO at Beginning of Year	10. NPO at End of Year
			(9) / (5)		(2) + (3) - (4)		(6) - (7)		(8) + (9)
6/30/2011	$ 133,903,337	$ (5,306,825)	$ (6,109,419)	12.4090	$ 134,705,931	$ 133,726,466	$ 979,465	$ (75,811,784)	$ (74,832,319)
6/30/2012	141,987,798	(5,238,262)	(6,030,487)	12.4090	142,780,023	135,605,408	7,174,615	(74,832,319)	(67,657,704)
6/30/2013	88,287,288	(4,566,895)	(5,315,993)	12.7272	89,036,386	137,110,691	(48,074,305)	(67,657,704)	(115,732,009)

H. Three-Year Trend Information

1. Year Ending	2. Net Pension Cost (NPC)	3. Actual Employer Contribution	4. % of NPC
			(3) / (2)
6/30/2011	$ 134,705,931	$ 133,726,466	99.3%
6/30/2012	142,780,023	135,605,408	95.0%
6/30/2013	89,036,386	137,110,691	154.0%

I. Solvency Test [1]

Portion of Actuarial Liability Provided by Assets
($ in Thousands)

1. As of	2. Member Contribution Balances	3. Retired and Beneficiaries	4. Non-Retired Members (Employer Financed Portion)	5. Total Actuarial Accrued Liabilities	6. Actuarial Value of Assets
12/31/2006	$ 455,476,000	$ 546,627,672	$ 1,647,421,561	$ 2,649,525,233	$ 2,860,512,434
	100.0%	100.0%	100.0%	108.0%	
12/31/2007	498,662,000	655,826,901	1,734,806,025	2,889,294,926	3,281,480,077
	100.0%	100.0%	100.0%	113.6%	
12/31/2008	534,303,000	765,909,426	1,850,614,597	3,150,827,023	3,352,705,438
	100.0%	100.0%	100.0%	106.4%	
6/30/2009	571,534,000	793,166,894	1,967,984,639	3,332,685,533	3,265,597,574
	100.0%	100.0%	96.6%	98.0%	
6/30/2010	634,864,721	859,626,595	2,145,177,957	3,639,669,273	3,374,437,839
	100.0%	100.0%	87.6%	92.7%	
6/30/2011	679,848,776	970,676,496	1,988,431,007	3,638,956,279	3,593,786,865
	100.0%	100.0%	97.7%	98.8%	
6/30/2012	728,891,808	1,135,537,898	2,258,006,406	4,122,436,112	3,786,594,692
	100.0%	100.0%	85.1%	91.9%	
6/30/2013	782,124,168	1,288,456,658	2,322,366,151	4,392,946,977	4,180,703,618
	100.0%	100.0%	90.9%	95.2%	

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

CENSUS DATA

A. Reconciliation of Participant Data

	Actives	Inactive Non-Vested With Member Contribution Balance	Inactive Vested	Disabled	Retired	Beneficiary	Total
Total as of June 30, 2012	13,390	751	122	690	1,927	591	17,471
New Entrants	413	24	-	-	-	-	437
Rehires	18	(18)	-	-	-	-	-
Non-Vested Terminations	(108)	108	-	-	-	-	-
Vested Terminations	(38)	-	38	-	-	-	-
Retirements	(251)	-	(30)	(6)	287	-	-
Disablements	(32)	-	-	34	(2)	-	-
Death with Beneficiary	(8)	-	(1)	(11)	(27)	47	-
Death without Beneficiary	(13)	-	-	(1)	(22)	(20)	(56)
Refunds	(84)	(58)	-	-	-	-	(142)
Data Adjustments	-	(11)	-	1	-	3	(7)
Total as of June 30, 2013	13,287	796	129	707	2,163	621	17,703

B. Census Information as of June 30, 2013

		Male	Female	Total
1.	Active			
	a. Number	12,554	733	13,287
	b. Average Age	41.9	41.5	41.9
	c. Average Years of Service	14.4	14.2	14.4
	d. Covered Payroll of Actives [1]	$ 665,713,167	$ 40,890,066	$ 706,603,233
2.	Inactive - Vested			
	a. Number	122	7	129
	b Average Age	50.0	48.5	49.9
	c. Average Years of Service	22.6	22.0	22.6
3.	Inactive - Non-Vested [2]			
	a. Number	697	99	796
4.	Retiree/Beneficiary/Disabled			
	a. Number	2,710	781	3,491
	b. Average Age	61.6	62.2	61.7
	c. Annual Benefits Payable	$ 72,875,374	$ 14,425,898	$ 87,301,272

[1] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

[2] For June 30, 2013, inactive non-vested members entitled to a refund of their member contributions totaling $6,733,809.

C. Schedule of Active Member Valuation Data [1]

1. As of	2. Active Members	3. Anticipated Payroll ($ in Thousands)[2]	4. Average Pay [2] (3) / (2)	5. Annual Percent Change
12/31/2004	11,424	$ 493,707	$ 43,217	3.4%
12/31/2005	11,728	522,227	44,528	3.0%
12/31/2006	12,056	557,644	46,254	3.9%
12/31/2007	12,611	603,963	47,892	3.5%
12/31/2008	13,095	644,936	49,251	2.8%
6/30/2009	13,184	649,018	49,228	(0.0%)
6/30/2010	13,362	675,797	50,576	2.7%
6/30/2011	13,376	687,342	51,386	1.6%
6/30/2012	13,390	697,111	52,062	1.3%
6/30/2013	13,287	706,603	53,180	2.1%

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.
[2] For the 1977 Fund, payroll is the applicable first class officer pay for each member.

D. Schedule of Retirees, Beneficiaries, and Disabled Members [1]

1.	2.	3.	4.	5.	6.	7.	8.	9.
	Added		Removed		End of Year [2]			
Year Ending	Number	Annual Allowances ($ in Thousands)	Number	Annual Allowances ($ in Thousands)	Number	Annual Allowances ($ in Thousands)	% Change in Annual Allowances	Average Annual Allowances
12/31/2004	14	$ 255	22	$ 387	1,898	$ 33,706	(1.5%)	$ 17,759
12/31/2005	257	5,493	28	554	2,127	38,648	14.7%	18,170
12/31/2006	172	3,860	34	592	2,265	41,973	8.6%	18,531
12/31/2007	333	8,101	50	886	2,548	49,537	18.0%	19,442
12/31/2008	255	5,861	273	4,565	2,530	53,588	8.2%	21,181
6/30/2009	102	2,571	24	479	2,608	55,564	3.7%	21,305
6/30/2010	208	4,918	34	641	2,782	60,220	8.4%	21,646
6/30/2011	218	6,179	34	609	2,966	68,179	13.2%	22,987
6/30/2012	281	7,900	39	814	3,208	76,917	12.8%	23,977
6/30/2013	326	10,098	43	845	3,491	87,301	13.5%	25,008

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] 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. Distribution of Active Members by Age and Service

Attained Age	Distribution of Active Members by Age and Service as of June 30, 2013										
	Under 1 year	1 to 4 years	5 to 9 years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	Over 40 years	Total
<25	71	45									116
25-29	182	609	249								1,040
30-34	98	484	1,055	184							1,821
35-39	28	264	922	1,040	175						2,429
40-44		33	478	1,010	1,152	129					2,802
45-49	1	3	39	441	785	810	165				2,244
50-54		2	10	39	307	614	644	92			1,708
55-59		1	4	6	63	187	301	277	29		868
60-64			1	6	15	9	91	93	22		237
65-69					3	1	1	15	1		21
70&Above					1						1
Total	380	1,441	2,758	2,726	2,501	1,750	1,202	477	52		13,287

F. Distribution of Inactive Vested Members by Age and Service

Attained Age	Distribution of Inactive Vested Members by Age and Service as of June 30, 2013				
	Under 20 years	20 to 24 years	25 to 29 years	Over 30 years	Total
<25					
25-29					
30-34					
35-39					
40-44		11			11
45-49		63	1		64
50-54		34	5	2	41
55-59		1	2	4	7
60-64		1		3	4
65-69		1	1		2
70&Above					
Total		111	9	9	129

G. Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired

Attained Age	Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired as of June 30, 2013							
	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	44	22	21	10	9	1	1	108
40-44	33	23	19	2	3			80
45-49	30	48	27	10	4	2		121
50-54	266	48	31	30	13	8	3	399
55-59	564	265	57	46	20	16	3	971
60-64	172	271	127	59	28	23	7	687
65-69	33	52	164	66	52	25	12	404
70-74	2	4	4	237	36	24	10	317
75-79		1	2	63	105	22	11	204
80-84			1	23	34	36	5	99
85-89			1	5	18	35	19	78
90&Above				1	5	8	9	23
Total	1,144	734	454	552	327	200	80	3,491

SECTION IV - CENSUS DATA

H. Schedule of Benefit Recipient by Type of Benefit Option

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

Amount of Monthly Benefit	Retiree Single Life Annuity	Retiree 60% Joint and Survivor Annuity	Survivors	Disability	Total
$ 1 - 500	0	0	13	0	13
501 - 1,000	0	10	138	30	178
1,001 - 1,500	24	120	312	102	558
1,501 - 2,000	77	398	101	230	806
2,001 - 3,000	211	1,064	48	317	1,640
over 3,000	41	218	9	28	296
Total	353	1,810	621	707	3,491

I. Schedule of Average Benefit Payments as of June 30, 2013 [1]

	Years of Credited Service							
	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
Average Monthly Defined Benefit	$ 1,877	$ 1,817	$ 1,748	$ 1,734	$ 1,864	$ 2,362	$ 2,553	$ 2,084
Average Final Average Salary	$ 43,776	$ 41,483	$ 45,969	$ 44,636	$ 43,120	$ 46,421	$ 48,656	$ 45,245
Number of Benefit Recipients	117	173	226	273	1,243	883	576	3,491

[1] For some members average salary at retirement and years of credited service was not available. The average salary for each group excludes these members.

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

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

Interest Rate / Investment Return	6.75% (net of administrative and investment expenses)
Interest on Member Balances	3.5% per year
Future Salary Increases	3.25% per year
Inflation	3.0% per year
Cost of Living Increases	2.25% per year in retirement
Mortality (Healthy and Disabled)	2013 IRS Static Mortality projected five (5) years with Scale AA
Disability	Based on 2005-2010 experience. Illustrative rates shown below:

Age	Rate
20	0.000%
25	0.075%
30	0.150%
35	0.200%
40	0.400%
45+	0.700%

A. Actuarial Assumptions (continued)

Termination

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

Service	Rate	Service	Rate
0	40.0%	7-9	2.0%
1	20.0%	10-14	1.5%
2	5.0%	15-19	1.0%
3	4.0%	20+	1.5%
4	3.5%		
5	3.0%		
6	2.5%		

Retirement

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

Ages	Service <32	Service >=32
45-51	10.0%	100.0%
52-57	10.0%	20.0%
58-61	15.0%	20.0%
62-64	20.0%	20.0%
65-69	50.0%	50.0%
70+	100.0%	100.0%

Decrement Timing

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

Active Members in DROP

Members who are participating in the DROP are assumed to receive an annuity benefit commencing at the end of their DROP period as well as a lump sum payment equal to the number of years they were in the DROP times their annual annuity benefit. The annuity benefit is estimated based on salary and service at the time the member entered the DROP.

Spouse/Beneficiary

80% of male members and 50% of female members are assumed to be married or to have a dependent beneficiary. Male members are assumed to be three (3) years older than females and female members are assumed to be the same age as males.

Disability Retirement

For members hired after 1989 that become disabled, impairments are assumed to be 45% Class 1 (at 65% of salary), 10% Class 2 (at 50% of salary), and 45% Class 3 (at 36% of salary).

A. Actuarial Assumptions (continued)

Pre-Retirement Death	Of active member deaths, 10% are assumed to be in the line of duty and 90% are other than in the line of duty. Additionally, all deaths among retired and disabled members are other than in line of duty.
Data Assumptions	Actives and inactives with either no date of birth and/or no gender are assumed to be age 41 and/or male. 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 single life annuity. Retirees and disabled members that are married and do not have a retirement option listed are assumed to be receiving a 60% joint and survivor annuity. Beneficiaries that do not have a retirement option listed are assumed to receive monthly payments for life.
Changes in Assumptions	For the June 30, 2013 valuation, the Board approved the following assumption changes: - The interest crediting rate assumption on member contribution balances was lowered from 5.5% to 3.5%.

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 Contribution Rate

   Based on the assumptions and methods previously described, an Actuarially Calculated Rate is computed. The Board considers this information, but has ultimate authority in setting the employer contribution rate.

4. Anticipated Payroll

   The Anticipated Payroll of $706,603,233 for the fiscal year beginning July 1, 2013 is equal to the 1st class officer salary in effect at July 1, 2013, but does not include amounts for members who have reached the age at which retirement is assumed to occur immediately.

5. Changes in Actuarial Methods

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

SUMMARY OF PLAN PROVISIONS

SECTION VI - SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions

The benefit provisions for the 1977 Fund are set forth in IC 36-8-8. A summary of those defined pension benefit provisions is presented below:

Participation		All full-time, fully-paid police officers and firefighters who work for employers participating in the 1977 Fund and who are hired or rehired after April 30, 1977.

Eligibility for Defined Pension Benefits

a.	Normal Retirement	Age 52 with 20 or more years of creditable service
b.	Early Retirement	Age 50 with 20 or more years of creditable service
c.	Late Retirement	Subject to continued employment after normal retirement
d.	Disability Retirement	As determined by a disability medical panel.
e.	Termination	20 or more years of creditable service and no longer active (i.e. vested inactive)
f.	Pre-Retirement Death	Immediate

Amount of Benefits

a.	Normal Retirement	The retirement benefit valued was 50% of the base salary (first-class salary) of a First Class Police Officer and Firefighter with 20 years of service, plus an additional 1% for each completed 6 months of service over 20 years up to a maximum of 74% with 32 years of service.
b.	Early Retirement	Early retirement benefits are reduced by 7% per year for commencement between ages 50 and 52.
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.

Summary of Plan Provisions (continued)

Amount of Benefits (continued)

d. Disability Retirement

Hired Before 1990 This disability benefit is only available to members hired prior to January 1, 1990 and who do not choose to be covered by the disability benefit for members hired after 1989. The disability benefit is equal to the benefit the member would have received if the member had retired. If the member does not have 20 years of service or is not at least age 52 on the date of disability, the benefit is computed as if the member does have 20 years of service and is age 52 on the date of disability.

Hired after 1989 This disability benefit is for members hired after 1989, or hired prior to January 1, 1990, who have chosen to be covered by this disability benefit. The following describes the three different classes of impairments and the amount of base benefit for each class:

Class 1 Impairment:
A personal injury that occurs while on duty, while responding to an emergency, or due to an occupational disease. The disability benefit is equal to a base benefit of 45% of base salary, plus an additional amount between 10% and 45% of this salary based on degree of impairment. The benefit is payable for life, at which time the member is entitled to a retirement benefit based on the salary and service the member would have earned had the member remained in active service.

Class 2 Impairment:
A proven duty-related disease. The disability benefit is equal to a base benefit of 22% of base salary, plus an additional 0.5% of this salary for each year of service up to a maximum of 30 years of service, plus an additional amount between 10% and 45% of this salary based on degree of impairment. If the member's total benefit is less than 30% of this salary and the member has fewer than 4 years of service, then the benefit is payable for a period equal to the years of service of the member. Otherwise, the benefit is payable for life.

Summary of Plan Provisions (continued)

Amount of Benefits (continued)

d. Disability Retirement (continued)

Hired after 1989 (continued)

Class 3 Impairment:
All other impairments that are not Class 1 or Class 2. The disability benefit is equal to a base benefit of 1% of base salary for each year of service up to a maximum of 30 years of service, plus an additional amount between 10% and 45% of this salary based on degree of impairment. If the member's total benefit is less than 30% of this salary and the member has fewer than 4 years of service, then the benefit is payable for a period equal to the years of service of the member. Otherwise, the benefit is payable until age 52, at which time the member is entitled to a retirement benefit based on 20 years of service.

e. Termination

If a member ends employment other than by death or disability before completing 20 years of active service, the member shall be entitled to the member's contributions plus accumulated interest. This benefit is not available to converted members.

If termination is after earning 20 years of service, the termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing of the normal retirement date. The member may elect to receive a reduced early retirement benefit.

f. Pre-Retirement Death

Surviving Spouse

If a member dies other than in the line of duty, the spouse's benefit is equal to 60% of the monthly benefit the member was receiving or was entitled to receive on the date of death.

If a member dies in the line of duty, the spouse's benefit is equal to the monthly benefit the member was receiving or was entitled to receive on the date of death.

In either case, if the member does not have 20 years of service or is not at least age 52 on the date of death, the benefit is computed as if the member does have 20 years of service and is age 52 on the date of death.

Summary of Plan Provisions (continued)

Amount of Benefits (continued)

f. Pre-Retirement Death (continued)

Children	A payment shall be made to each child of a deceased member equal to 20% of the member's benefit until the later of (a) the date the child becomes age 18, or (b) the date the child becomes age 23 if enrolled in a qualified school. If a child is at least 18 and is mentally or physically incapacitated, the child is entitled to an amount equal to the greater of 30% of the base salary, or 55% of the member's benefit payable for the duration of the incapacity. If the member does not have 20 years of service or is not at least age 52 on the date of death, the benefit is computed as if the member does have 20 years of service and is age 52 on the date of death.
Dependent Parents	If a deceased member leaves no surviving spouse and no qualified child but does leave a dependent parent or parents, an amount equal to 50% of the member's benefit shall be paid to the parent or parents jointly during their lifetime. If the member does not have 20 years of service or is not at least age 52 on the date of death, the benefit is computed as if the member does have 20 years of service and is age 52 on the date of death.
No Spouse or Dependent	If a deceased member leaves no surviving spouse, no qualified dependent child, nor a dependent parent, a refund of the member's contributions plus accumulated interest will be made to the member's estate.

g. Additional Death Benefits — A funeral death benefit is paid to the heirs or estate upon the member's death from any cause and is equal to at least $12,000. An additional death benefit of $150,000 is paid from the Pension Relief Fund to a surviving spouse, children, or parent(s) if death occurs in the line of duty.

Member Contributions — Members are assumed to contribute at the rate of 6% of salary until they have completed 32 years of service.

Summary of Plan Provisions (continued)

Withdrawal from Fund	If a member's employment is terminated prior to eligibility for a retirement annuity, the member may withdraw their contributions form the Fund.
Deferred Retirement Option Plan ("DROP")	The DROP is an optional form of benefit, which allows members who are eligible for an unreduced retirement benefit to continue to work and earn a salary while accumulating a DROP benefit payable in a lump sum or three annual installments. A member who elects to enter the DROP shall execute an irrevocable election to retire on the DROP retirement date. The member shall select a DROP retirement date not less than 12 months and not more than 36 months after the member's DROP entry date. While in the DROP, the member shall continue to make applicable fund contributions. When a member enters the DROP, a "DROP frozen benefit" will be calculated. This is equal to the member's monthly retirement benefit based on accrued service and base salary as of the date member enters the DROP. Upon DROP retirement, the member is eligible to receive a lump sum equal to the amount of the DROP frozen benefit multiplied by the number of months in the DROP. You may elect to receive this amount in three annual installments instead of in a single lump sum. In addition, the member will receive a monthly retirement benefit equal to the DROP frozen benefit. The member will not continue to accrue service credit for the years in the DROP. Cost of living adjustments will not apply to the frozen monthly benefit while in the DROP. The cost of living adjustments will begin to be applied to the frozen monthly benefit, however, in the year after the year in which the member retires. If the member elected to participate in the DROP, the member may, upon retirement, elect to forego DROP benefits, and instead receive monthly retirement benefits calculated as if the member never elected to participate in the DROP. These benefits would be based on accrued service and base salary as of the date the member retires.

Summary of Plan Provisions (continued)

Forms of Payment		
a.	Single Life Annuity	Member will receive a monthly benefit for life, but there are no monthly payments to anyone after death.
b.	Joint with 60% Survivor Benefits	Member will be paid a monthly benefit for life. After death, 60% of the benefit will be paid to the spouse or parent for their lifetime or the dependent until age 18.
Cost-of-Living Adjustments		Benefits for retired members are increased annually based on increases in the CPI-U index. The increase is subject to a 3% maximum and 0% minimum.
Changes in Provisions		No changes since prior valuation.

DEFINITIONS OF TECHNICAL TERMS

Definitions of Technical Terms

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

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.
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.
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.

Definitions of Technical Terms (continued)

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.