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# The State of Indiana Public Employees' Retirement Fund

Public Employees' Retirement Fund

Actuarial Valuation as of June 30, 2010





April 20, 2011

Board of Trustees The State of Indiana Public Employees' Retirement Fund 1 North Capitol, Suite 001 Indianapolis, IN 46204

Re: Certification of the Actuarial Valuations of the State of Indiana Public Employees' Retirement Fund as of June 30, 2010

**Dear Board of Trustees:** 

Actuarial valuations are performed annually for the State of Indiana Public Employees' Retirement Fund ("Indiana PERF") defined benefit pension plans ("Plans"). The results of the latest actuarial valuations, which were prepared as of June 30, 2010, are presented in individual valuation reports for each fund and were prepared pursuant to the engagement letter between Indiana PERF 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 are adopted annually for each Plan by the Board. These rates are actuarially determined based on the Board's funding policy and adopted actuarial assumptions. Contribution rates determined by the actuarial valuation become effective either twelve or eighteen months after the valuation date, depending on the applicable employer. For example, the rates determined by the June 30, 2010 actuarial valuation and adopted by the Board will become effective on either July 1, 2011 or January 1, 2012. If new legislation is enacted between the valuation date and the date the contribution rates become effective, the Board may adjust the recommended rates 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 the contribution rates, the Board's principal objectives have been:

- To set contribution rates such that the unfunded actuarial accrued liability ("UAAL") will be amortized over a 30-year period.
- To set contribution rates such that they remain relatively level over time.

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

In addition, the Board has adopted contribution rate smoothing rules for the Public Employees' Retirement Fund, the State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan, the 1977 Police Officers' and Firefighters' Pension and Disability Fund, and the Prosecuting Attorneys' Retirement Fund. The contribution rate smoothing rules vary based on the size of the employer and are periodically revised via Board Resolutions. The contribution rate smoothing rules reduce annual volatility in the contribution rates, by phasing in the effects of gains and losses over time.

For 2008, an additional smoothing rule was adopted which stated that any employer contribution amount or rate developed based on the 2008 valuation could not be less than the employer contribution amount or rate based on the prior year valuation. This smoothing rule was adopted in anticipation of the recent economic downturn. This additional smoothing rule was continued for the 2009 and 2010 valuations, but will be reconsidered in future years.

No membership growth is anticipated in setting the contribution rate. This is consistent with GASB #25, which prohibits anticipating membership growth in determining the minimum 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 7.4% from the preceding year due to experience losses when compared to that anticipated by the actuarial assumptions.

#### **Benefit Provisions**

The benefit provisions reflected in the valuation reports are those which were in effect at June 30, 2010, as set forth in the related Indiana statutes. None of the Plans had any material changes in benefit provisions since the 2009 valuation.

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

The valuations were based on asset values of the trust funds and member census data as of June 30, 2010. All asset and member data was provided by Indiana PERF. 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 actuarial assumptions and methods used in the valuations have been selected and approved by the Board. In our opinion, the 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 PERF as of June 30, 2010.

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).

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 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 PwC and Indiana PERF 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 Indiana PERF and PwC, and is intended solely for the use and benefits of Indiana PERF and not for reliance by any other person.

Respectfully submitted,

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### TABLE OF CONTENTS

I.	EXECUTIVE SUMMARY	1
II.	FUNDING	
	A. Development of Funded Status	8
	B. Unfunded Actuarial Accrued Liability Reconciliation	9
	C. Actuarial Accrued Liability Reconciliation	10
	D. Reconciliation of Market Value of Assets	11
	E. Reconciliation of Actuarial Value of Assets	12
	F. Allocation of Assets	13
	G. State – Contribution Rate	14
	H. Political Subdivisions – Aggregate Contribution Rate	15
	I. State – Unfunded Actuarial Accrued Liability Amortization Schedule	16
	J. Political Subdivisions – Unfunded Actuarial Accrued Liability Amortization Schedule	16
	K. History of Employer Contribution Rates	17
	L. Historical Investment Experience	18
III.	ACCOUNTING	
	A. Assumptions and Methods Under GASB #25 and #27	19
	B. Membership Data	19
	C. Total PERF – Statement of Plan Net Assets	20
	D. Total PERF – Statement of Changes in Plan Net Assets	21
	E. Total PERF – Schedule of Funding Progress	22
	F. State – Schedule of Funding Progress	22
	G. Political Subdivisions – Schedule of Funding Progress	22
	H. Total PERF – Schedule of Employer Contributions	23
	I. State – Schedule of Employer Contributions	23
	J. Political Subdivisions – Schedule of Employer Contributions	23
	K. State – Development of Net Pension Obligation (NPO)	24
	L. Political Subdivisions – Development of Net Pension Obligation (NPO)	24
	M. State – Three-Year Trend Information	25
	N. Political Subdivisions – Three-Year Trend Information	25
	O. Solvency Test	26
IV.	CENSUS DATA	27
v.	ACTUARIAL ASSUMPTIONS AND METHODS	34
VI.	SUMMARY OF PLAN PROVISIONS	40
VII.	DEFINITIONS OF TECHNICAL TERMS	45

Indiana PERF

#### 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 2012 (July 1, 2011 through June 30, 2012 for State and January 1, 2012 through December 31, 2012 for Political Subdivisions), and certain financial statement disclosure information. The valuation was performed using census data for plan members as of as of June 30, 2010 provided by Indiana PERF, asset information as of June 30, 2010 provided by Indiana PERF, the actuarial assumptions and methods approved by the Board and summarized in Section V, and the plan provisions effective June 30, 2010 as summarized in Section VI.

#### **Contribution Rates**

The State employer contribution rate, after reflecting the contribution smoothing rules, increased from 7.0% to 8.6%. This contribution rate is equal to the prior year Actual Rate (after smoothing), plus a portion of the increase (or less a portion of the decrease) between the current year True Rate (prior to smoothing) and the prior year's Actual Rate, rounded to the nearest tenth of a percent. The contribution rate determined by the June 30, 2010 valuation becomes effective on July 1, 2011. Therefore, the actual dollar amount of employer cost will depend on the actual payroll during fiscal year 2012.

The Political Subdivisions employer contribution rate, after reflecting the contribution smoothing rules and aggregating over all participating Political Subdivisions, increased from 7.9% to 8.8%. The contribution rate for each Political Subdivision is smoothed based on its respective size. The Political Subdivisions contribution rates determined by the June 30, 2010 valuation become effective on January 1, 2012. Therefore, the actual dollar amount of employer cost will depend on the actual payroll during calendar year 2012.

In addition to the smoothing rules stated above, an additional rule was implemented such that the current year Actual Rate cannot be less than the prior year Actual Rate. This additional smoothing rule applied for this year as the contribution rates for certain Political Subdivisions would have decreased this year without this additional requirement.

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 total liability measure for PERF. While there are several such measures that could be appropriately used, the total 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 93.1% at June 30, 2009 to 85.2% at June 30, 2010. The decrease is primarily due to a loss on the AVA from smoothing investment losses that occurred in 2008 and 2009, as well as the net effect of changes to the discount rate, cost-of-living, and mortality assumptions, which increased the AAL.

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

#### **Investment Experience**

On a Market Value basis, from June 30, 2009 to June 30, 2010, PERF experienced an approximate investment return of 13.5%. However, on an Actuarial Value basis over the same time period, PERF experienced an approximate investment return of (0.7%). The negative investment return on the AVA can be attributed to the smoothing of prior losses that more than offset the gain on Market Value from June 30, 2009 to June 30, 2010.

#### **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, 2010. Instead a "13th check" was paid to each member in pay status during September 2010. 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, 2010 valuation, the Board approved the following assumption changes:

- The interest rate (net of administrative and investment expenses) was lowered from 7.25% to 7.0%.
- The cost-of-living increase assumption changed from 1.5% compounded annually to 1.0% compounded annually. No increase is assumed to be applied to annuitized ASA balances.
- The mortality assumption was changed from rates based on PERF experience from 1995-2000 to the IRS 2008 Static Mortality Table projected forward five (5) years with Scale AA.

### **Changes in Plan Provisions**

There have been no changes in the plan provisions since the June 30, 2009 valuation.

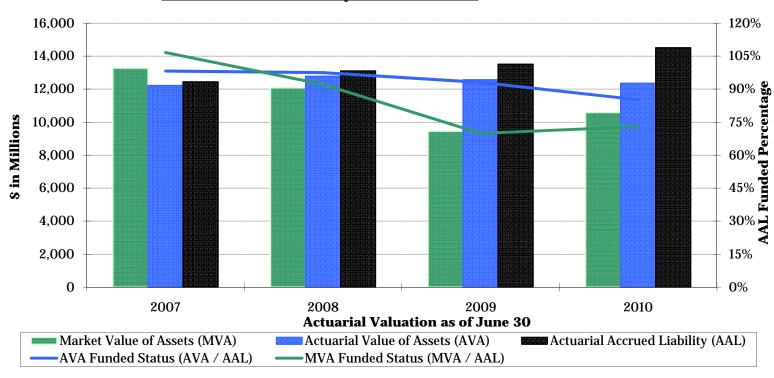
### **Changes in Actuarial Methods**

For the June 30, 2010 valuation, the Board approved the following method change:

- The AVA was changed from 75% of the expected Actuarial Value, plus 25% of the actual Market Value to a four-year smoothing of gains and losses on the MVA, with a 20% corridor, where the AVA cannot be more than 120% or less than 80% of the Market Value of Assets ("MVA") after the four-year smoothing of gains and losses is applied. This change was made to be consistent with the other PERF plans and to ensure convergence of the AVA and MVA.

### **HISTORICAL SUMMARY**

Total PERF - 4 Year History of Funded Status 1



Actuarial Valuation as of June 30:	<u> 2007</u>	<u> 2008</u>	<b>2009</b>	<u> 2010</u>
Actuarial Accrued Liability (AAL)	\$12,439.8	\$13,103.2	\$13,506.3	\$14,506.1
Actuarial Value of Assets (AVA)	12,220.9	12,780.1	12,569.3	12,357.2
Market Value of Assets (MVA)	13,262.4	12,073.5	9,442.3	10,581.3
Unfunded Liability (AAL - AVA)	218.9	323.1	937.0	2,148.9
AVA Funded Status (AVA / AAL)	98.2%	97.5%	93.1%	85.2%
MVA Funded Status (MVA / AAL)	106.6%	92.1%	69.9%	72.9%

<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** <sup>1</sup>

	Jı	ıne 30, 2007	Ju	ne 30, 2008	Ju	me 30, 2009	Jı	ıne 30, 2010
Employer Contributions - Before Smoothing								
Normal Cost (Beginning of Year)	\$	267,642,927	\$	279,655,104	\$	298,159,870	\$	320,524,189
Amortization of Unfunded Actuarial Accrued Liability		17,041,115		25,269,003		72,839,046		163,318,289
Total Contribution Amount	\$	284,684,042	\$	304,924,107	\$	370,998,916	\$	483,842,478
Contribution Rate		6.7%		6.9%		7.8%		9.9%
Employer Contributions - After Smoothing								
Contribution Amount	\$	290,622,068	\$	310,571,401	\$	360,183,300	\$	428,086,297
Contribution Rate <sup>2</sup>		6.6%		6.8%		7.3%		8.7%

 $<sup>^{1}</sup>$  Valuation results prior to June 30, 2010 were calculated by the prior actuary. Contribution rates prior to June 30, 2010 reflect a half-year of interest.

<sup>&</sup>lt;sup>2</sup> The Employer Contributions are based on the aggregate of the State and Political Subdivisions' contribution amounts based on payroll as of June 30, 2010. Since the contribution rates determined by the June 30, 2010 valuation become effective July 1, 2011 for the State rate and January 1, 2012 for the Political Subdivisions' rates, the actual dollar amount of employer cost will depend on the actual payroll during fiscal year 2012 for the State and calendar year 2012 for the Political Subdivisions. The amount shown is meant to illustrate the impact of the contribution rate smoothing.

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

### State - Summary of Valuation Results 1

	June 30, 2007		June 30, 2008		June 30, 2009		June 30, 2010	
Employer Contributions - Before Smoothing								
Normal Cost (Beginning of Year)	\$	94,396,107	\$	98,916,617	\$	103,491,300	\$	110,142,867
Amortization of Unfunded Actuarial Accrued Liability		(1,199,457)		3,417,230	-	24,800,374		66,147,093
Total Contribution Amount	\$	93,196,650	\$	102,333,847	\$	128,291,674	\$	176,289,960
Contribution Rate		6.1%		6.4%		7.6%		10.2%
Employer Contributions - After Smoothing								
Contribution Amount	\$	99,134,676	\$	107,981,141	\$	118,199,909	\$	148,821,254 2
Contribution Rate		6.3%		6.5%		7.0%		8.6%

### Political Subdivisions - Summary of Valuation Results 1

	Ju	June 30, 2007 June 30, 2008		Ju	June 30, 2009		ıne 30, 2010	
Employer Contributions - Before Smoothing								
Normal Cost (Beginning of Year)	\$	173,246,820	\$	180,738,487	\$	194,668,570	\$	210,381,322
Amortization of Unfunded Actuarial Accrued Liability		18,240,572		21,851,773		48,038,672		97,171,196
Total Contribution Amount	\$	191,487,392	\$	202,590,260	\$	242,707,242	\$	307,552,518
Contribution Rate		7.1%	7.1%		7.9%			9.7%
Employer Contributions - After Smoothing								
Contribution Amount	\$	191,487,392	\$	202,590,260	\$	241,983,391	\$	279,265,043 <sup>3</sup>
Contribution Rate <sup>4</sup>		7.1%		7.1%		7.9%		8.8%

<sup>&</sup>lt;sup>1</sup> Valuation results prior to June 30, 2010 were calculated by the prior actuary. Contribution rates prior to June 30, 2010 reflect a half-year of interest.

<sup>&</sup>lt;sup>2</sup> The Employer Contributions are based on the State payroll as of June 30, 2010. Since the contribution rates determined by the June 30, 2010 valuation become effective on July 1, 2011, the actual dollar amount of employer cost for the State will depend on the actual payroll during fiscal year 2012. The amount shown is meant to illustrate the impact of contribution rate smoothing.

<sup>&</sup>lt;sup>3</sup> The Employer Contributions are based on the Political Subdivision payroll as of June 30, 2010. Since the contribution rates determined by the June 30, 2010 valuation become effective on January 1, 2012, the actual dollar amount of employer cost for the Political Subdivisions will depend on the actual payroll during calendar year 2012. The amount shown is meant to illustrate the impact of contribution rate smoothing.

<sup>&</sup>lt;sup>4</sup> Contribution rate smoothing is applied to each individual Political Subdivision. The employer rate shown is the weighted average of those smoothed rates.

### HISTORICAL SUMMARY (CONTINUED)

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

	Ju	ıne 30, 2007	J	une 30, 2008	J	une 30, 2009	J	une 30, 2010
Census Information								
Active								
Number								
State		45,465		45,713		46,749		48,220
Political Subdivisions		93,398		94,433		101,043		101,657
Total		138,863		140,146		147,792		149,877
Average Age		47.8		47.8		47.3		47.5
Average Years of Service		11.4		11.6		10.9		11.2
Covered Payroll of Actives								
State		1,573,566,285		1,661,248,319		1,749,780,803		1,730,479,696
Political Subdivisions		2,812,109,584		2,939,105,575		3,181,642,137		3,165,532,884
Total	\$	4,385,675,869	\$	4,600,353,894	\$	4,931,422,940	\$	4,896,012,580
Inactive - Vested								
Number		14,789		15,450		10,670		14,759
Average Age								53.9
Average Years of Service								15.1
Inactive - Non-Vested								
Number								88,234
Retiree/Beneficiary/Disabled								
Number		60,332		62,424		65,099		67,166
Average Age								72.6
Annual Benefits Payable	\$	412,744,835	\$	436,748,994	\$	477,552,507	\$	498,199,312

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

### HISTORICAL SUMMARY (CONTINUED)

### **Total PERF - Summary of Valuation Results (Continued)** <sup>1</sup>

		June 30, 2007		une 30, 2008	June 30, 2009			June 30, 2010	
Actuarial Accrued Liability (AAL)									
ASA Account Balance			\$	2,694,331,410	\$	2,669,318,240	\$	2,780,570,388	
ASA Annuities - Retiree/Beneficiary/Disabled								710,683,223	
Pension - Retiree/Beneficiary/Disabled				4,227,365,567		4,611,256,619		4,220,908,907	
Pension - Active and Inactive				0.510.501.050		0.440.000.007		0.070.000.700	
State				2,513,791,279		2,443,039,325		2,678,030,588	
Political Subdivisions Total			\$	3,667,732,921 6,181,524,200	\$	3,782,666,167 6,225,705,492	\$	4,115,859,095 6,793,889,683	
Total	0	10 400 700 100	S						
i otai	\$	12,439,798,183	\$	13,103,221,177	\$	13,506,280,351	\$	14,506,052,201	
Actuarial Value of Assets (AVA)									
ASA Account Balance			\$	2,694,331,410	\$	2,669,318,240	\$	2,780,570,388	
ASA Annuities - Retiree/Beneficiary/Disabled								710,683,223	
Pension - Retiree/Beneficiary/Disabled				4,227,365,567		4,611,256,619		4,220,908,907	
Pension - Active and Inactive				5,858,419,075		5,288,761,052		4,645,036,496	
Total	\$	12,220,934,214	\$	12,780,116,052	\$	12,569,335,911	\$	12,357,199,014	
Market Value of Assets (MVA)									
ASA Account Balance			\$	2,694,331,410	\$	2,669,318,240	\$	2,780,570,388	
ASA Annuities - Retiree/Beneficiary/Disabled								710,683,223	
Pension - Retiree/Beneficiary/Disabled				4,227,365,567		4,611,256,619		4,220,908,907	
Pension - Active and Inactive				5,151,772,961		2,161,760,681		2,869,156,895	
Total	\$	13,262,413,477	\$	12,073,469,938	\$	9,442,335,540	\$	10,581,319,413	
Unfunded Actuarial Accrued Liability: AAL - AV	Α								
ASA Account Balance			\$	-	\$	-	\$	-	
ASA Annuities - Retiree/Beneficiary/Disabled								-	
Pension - Retiree/Beneficiary/Disabled				-		-		-	
Pension - Active and Inactive				323,105,125		936,944,440		2,148,853,187	
Total	\$	218,863,969	\$	323,105,125	\$	936,944,440	\$	2,148,853,187	
Funded Percentage: AVA / AAL									
ASA Account Balance				100.0%		100.0%		100.0%	
ASA Annuities - Retiree/Beneficiary/Disabled								100.0%	
Pension - Retiree/Beneficiary/Disabled				100.0%		100.0%		100.0%	
Pension - Active and Inactive				94.8%		85.0%		68.4%	
Total		98.2%		97.5%		93.1%		85.2%	
Summary of Assumptions									
Valuation Interest Rate		7.25%		7.25%		7.25%		7.0%	
Salary Scale		4.0%		4.0%		4.0%		4.0%	
Cost-of-Living Assumption		2.75%		2.75%		1.5%		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	8
B. Unfunded Actuarial Accrued Liability Reconciliation	9
C. Actuarial Accrued Liability Reconciliation	10
D. Reconciliation of Market Value of Assets	11
E. Reconciliation of Actuarial Value of Assets	12
F. Allocation of Assets	13
G. State – Contribution Rate	14
H. Political Subdivisions – Aggregate Contribution Rate	15
I. State – Unfunded Actuarial Accrued Liability Amortization Schedule	16
J. Political Subdivisions – Unfunded Actuarial Accrued Liability Amortization Schedule	16
K. History of Employer Contribution Rates	17
L. Historical Investment Experience	18

Indiana PERF

# A. <u>Development of Funded Status</u> <sup>1</sup>

			J	une 30, 2009	J	une 30, 2010
1.	Act	uarial Accrued Liability				
	a.	Annuity Savings Account	\$	2,669,318,240	\$	2,780,570,388
	b.	ASA Annuities				710,683,223
	c.	Retirees, Beneficiaries, and Disabled		4,611,256,619		4,220,908,907
	d.	Active and Inactive		6,225,705,492		6,793,889,683
	e.	Total: $(1)(a) + (1)(b) + (1)(c) + (1)(d)$	\$	13,506,280,351	\$	14,506,052,201
2.	Act	cuarial Value of Assets				
	a.	Annuity Savings Account	\$	2,669,318,240	\$	2,780,570,388
	b.	ASA Annuities				710,683,223
	c.	Retirees, Beneficiaries, and Disabled		4,611,256,619		4,220,908,907
	d.	Active and Inactive		5,288,761,052		4,645,036,496
	e.	Total: $(2)(a) + (2)(b) + (2)(c) + (2)(d)$	\$	12,569,335,911	\$	12,357,199,014
3.	Uni	funded Actuarial Accrued Liability				
	a.	Annuity Savings Account	\$	-	\$	-
	b.	ASA Annuities				-
	c.	Retirees, Beneficiaries, and Disabled		-		-
	d.	Active and Inactive		936,944,440		2,148,853,187
	e.	Total: (1)(e) - (2)(e)	\$	936,944,440	\$	2,148,853,187
4.	Fur	nded Status				
	a.	Annuity Savings Account		100.0%		100.0%
	b.	ASA Annuities				100.0%
	c.	Retirees, Beneficiaries, and Disabled		100.0%		100.0%
	d.	Active and Inactive		85.0%		68.4%
	e.	Total: (2)(e) / (1)(e)		93.1%		85.2%

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

# B. <u>Unfunded Actuarial Accrued Liability Reconciliation</u> <sup>1</sup>

		<b>J</b> ı	une 30, 2009	<b>June 30, 2010</b>		
1.	Unfunded Actuarial Accrued Liability, Prior Year	\$	323,105,125	\$	936,944,440	
2.	Changes in Unfunded Actuarial Accrued Liability					
	a. Actuarial Value of Assets Experience (Gain)/Loss	\$	1,042,333,456	\$	879,515,662	
	b. Actuarial Accrued Liability Experience (Gain)/Loss		(424,818,257)		10,544,338	
	c. Additional Liability Due to Transition from Prior Actuary		-		87,125,871	
	d. Additional Liability Due to Changes in Actuarial Assumptions		-		244,914,281	
	e. Additional Liability Due to Changes in Plan Provisions		-		-	
	f. Total New Amortization Bases		N/A	\$	1,222,100,152	
	(2)(a) + (2)(b) + (2)(c) + 2(d) + (2)(e)					
	g. Amortization of Existing Bases		(3,675,884)		(10,191,405)	
	h. Change in Unfunded Actuarial Accrued Liability:	\$	613,839,315	\$	1,211,908,747	
	(2)(f) + (2)(g)					
3.	Unfunded Actuarial Accrued Liability, Current Year: (1) + (2)(h)	\$	936,944,440	\$	2,148,853,187	

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

# C. Actuarial Accrued Liability Reconciliation

1.	June 30, 2009 Actuarial Accrued Liability <sup>1</sup>	\$ 13,506,280,351	
2.	Normal Cost <sup>1</sup>	298,159,870	
3.	Actual Benefit Payments	619,343,234	
4.	Interest of $7.25\%$ on $(1) + (2) - (3)/2$	 978,370,724	
5.	Expected June 30, 2010 Actuarial Accrued Liability:	\$ 14,163,467,711	
	(1) + (2) - (3) + (4)		
		<b>Dollar Change</b>	Percent Change
		 in Liability	in Liability
6.	(Gain)/Loss Components		
	a. Transition from Prior Actuary	\$ 87,125,871	0.6%
	b. Census	10,544,338	0.1%
	c. Mortality Assumption Change	385,720,930	2.7%
	d. Cost-of-living Assumption (COLA) Change	(453,630,856)	(3.2%)
	e. Discount Rate Assumption Change	 312,824,207	2.2%
	f. Total: $(6)(a) + (6)(b) + (6)(c) + (6)(d) + (6)(e)$	\$ 342,584,490	2.4%
7.	Actual June 30, 2010 Actuarial Accrued Liability: (5) + (6)(f)	\$ 14,506,052,201	

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

# D. Reconciliation of Market Value of Assets

		June 30, 2009	June 30, 2010
1.	Market Value of Assets, Prior June 30	\$ 12,073,469,938	\$ 9,442,335,540
2.	Receipts		
	a. Employer Contributions	\$ 323,151,092	\$ 331,089,590
	b. Employee Contributions	160,033,862	158,089,692
	c. Investment Income and Dividends Net of Fees	(2,517,954,977)	1,290,841,251
	d. Security Lending Income Net of Fees	-	6,701,978
	e. Net Transfers In	3,147,867	2,339,098
	f. Miscellaneous Income	 <u>-</u>	 61,417
	g. Total Receipts:	\$ (2,031,622,156)	\$ 1,789,123,026
3.	Disbursements		
	a. Benefits Paid During the Year	\$ 536,783,325	\$ 579,710,876
	b. Refund of Contributions and Interest	36,098,593	39,632,358
	c. Administrative Expenses	21,497,782	24,958,702
	d. Net Transfers Out	5,132,542	5,837,217
	e. Miscellaneous Disbursements	 -	<u>-</u>
	f. Total Disbursements:	\$ 599,512,242	\$ 650,139,153
4.	Market Value of Assets, Current June 30: (1) + (2)(g) + (3)(f)	\$ 9,442,335,540	\$ 10,581,319,413
5.	Market Value of Assets Approximate Annual Rate of Investment Return	(21.1%)	13.5%

### E. Reconciliation of Actuarial Value of Assets

1.	Market Value of Assets, June 30, 2009	\$	9,442,335,540					
2.	Market Value of Assets, June 30, 2010		10,581,319,413					
3.	Expected Earnings/Expenses  a. Expected Investment Earnings at 7.25% on June 30, 2009 Market Value  b. Expected Receipts and Investment Earnings at 7.25%  c. Expected Disbursements and Investment Expenses at 7.25%		684,569,327 509,399,565 647,843,242					
4.	Expected Assets, June 30, 2010: $(1) + (3)(a) + (3)(b) + (3)(c)$	\$	9,988,461,190					
5.	2009-2010 Gain/(Loss): (2) - (4)		592,858,223					
6.	Smoothing of Gain/(Loss)  Year Gain/(Loss) % Unrecognized							
	a. 2009-2010 \$ 592,858,223 75%		444,643,667					
	b. 2008-2009 (3,411,455,871) 50%		(1,705,727,936)					
	c. 2007-2008 (2,059,181,327) 25%		(514,795,332)					
7.	Preliminary Actuarial Value of Assets, June 30, 2010: (2) - (6)(a) - (6)(b) - (6)(c)	\$	12,357,199,014					
8.	Corridor							
	a. 120% of Market Value		12,697,583,296					
	b. 80% of Market Value		8,465,055,530					
9.	Actuarial Value of Assets, June 30, 2010	8	12,357,199,014					
10.	Actuarial Value of Assets as a Percent of Market Value: (9) / (2)		116.8%					
11.	Actuarial Value of Assets Approximate Annual Rate of Investment Return							

# F. Allocation of Assets

		Jı	une 30, 2009	June 30, 2010		
1.	Total Assets Available for Benefit					
	a. Market Value of Assets	\$	9,442,335,540	\$	10,581,319,413	
	b. Actuarial Value of Assets		12,569,335,911		12,357,199,014	
2.	Annuity Savings Accounts		2,669,318,240		2,780,570,388	
3.	Assets for Retirees, Beneficiaries, and Disabled Members, including ASA Ar	nuities				
	a. Retirees, Beneficiaries, and Disabled	\$	4,611,256,619	\$	4,220,908,907	
	b. ASA Annuities				710,683,223	
	c. Total	\$	4,611,256,619	\$	4,931,592,130	
4.	Total Non-Retired Assets					
	a. Market Value of Assets: (1)(a) - (2) - (3)(c)	\$	2,161,760,681	\$	2,869,156,895	
	b. Actuarial Value of Assets: (1)(b) - (2) - (3)(c)	\$	5,288,761,052	\$	4,645,036,496	
5.	Total Ledger Assets	\$	2,353,380,818	\$	3,100,604,632	
	a. State Amount	\$	944,042,551	\$	1,203,962,341	
	b. State Percent		40.1%		38.8%	
	c. Political Subdivisions Amount	\$	1,409,338,267	\$	1,896,642,291	
	d. Political Subdivisions Percent		59.9%		61.2%	
6.	State Allocation					
	a. Market Value of Assets: (4)(a) x (5)(b)	\$	867,175,446	\$	1,114,091,367	
	b. Actuarial Value of Assets: (4)(b) x (5)(b)	\$	2,121,550,162	\$	1,803,664,020	
7.	Political Subdivisions Allocation					
	a. Market Value of Assets: (4)(a) x (5)(d)	\$	1,294,585,235	\$	1,755,065,528	
	b. Actuarial Value of Assets: (4)(b) x (5)(d)	\$	3,167,210,890	\$	2,841,372,476	

### G. State - Contribution Rate

		June 30, 2010					
			\$	% of Payroll			
1.	Current Payroll	\$	1,730,479,696				
2.	Normal Cost (Beginning of Year)		110,142,867	6.37%			
3.	Unfunded Actuarial Accrued Liability (UAAL) Amortizations						
	a. UAAL Balance		874,366,568				
	b. Annual Amortization		66,147,093	3.82%			
4.	Employer Contributions - True Rate (Before Smoothing): (2) + (3)(b)		176,289,960	10.19%			
5.	Prior Year Actual Rate			7.00%			
6.	Difference between True Rate and Prior Year Actual Rate: (4) - (5)			3.19%			
7.	If increase, one-half of difference in (6); if decrease, excess of (6) over 1.00%; rounded up the nearest tenth percent			1.60%			
8.	Employer Contributions - Actual Rate (After Smoothing): [(5) + (7), not less than (5)]		<b>148,821,254</b> <sup>1</sup>	8.60%			

Indiana PERF 14

<sup>&</sup>lt;sup>1</sup> The Employer Contributions are based on the State payroll as of June 30, 2010. Since the State contribution rate determined by the June 30, 2010 valuation becomes effective on July 1, 2011, the actual dollar amount of employer cost will depend on the actual payroll during fiscal year 2012. The amount shown is meant to illustrate the impact of contribution rate smoothing.

### H. Political Subdivisions - Aggregate Contribution Rate

June 30, 2010 % of Payroll \$ **Current Payroll** 3,165,532,884 S Normal Cost (Beginning of Year) 2. 210,381,322 6.65% Unfunded Actuarial Accrued Liability (UAAL) Amortizations 3. **UAAL Balance** a. 1.274.486.619 **Annual Amortization** 97.171.196 3.07% Employer Contributions - True Rate (Before Smoothing): (2) + (3)(b) 307,552,518 9.72% **Prior Year Actual Rate** 7.88% Difference between True Rate and Prior Year Actual Rate: (4) - (5) 1.84% **279.265.043** <sup>1</sup> 8.82%<sup>2</sup> **Employer Contributions - Actual Rate (After Smoothing)** 7.

<sup>&</sup>lt;sup>1</sup> The Employer Cntributions are based on the Political Subdivision payroll as of June 30, 2010. Since the contribution rates determined by the June 30, 2010 valuation become effective on January 1, 2012, the actual dollar amount of employer cost will depend on the actual payroll during calendar year 2012. The amount shown is meant to illustrate the impact of contribution rate smoothing.

<sup>&</sup>lt;sup>2</sup> Contribution rate smoothing is applied to each individual Political Subdivision. The employer rate shown is the weighted average of those smoothed rates.

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

### I. State

	Date Base Established	Reason		Remaining Unfunded	Remaining Period	Amortization Amount	
1.	6/30/2008	Fresh Start	\$	43,429,316	28	\$	3,344,136
2.	6/30/2009	Actuarial Experience Loss		274,769,410	29		20,915,512
3.	6/30/2010	Actuarial Experience Loss and Change in Actuarial Assumptions		556,167,842	30		41,887,445
4.	Total		\$	874,366,568		\$	66,147,093

### J. Political Subdivisions

	Date Base			Remaining	Remaining	Α	Amortization	
Established		Reason		Unfunded	Period		Amount	
1.	6/30/2006	Fresh Start	\$	221,728,089	26	\$	17,522,949	
2.	6/30/2007	Actuarial Experience Gain and Change in Actuarial Assumptions		4,434,969	27		345,786	
3.	6/30/2008	Actuarial Experience Loss		45,894,481	28		3,533,958	
4.	6/30/2009	Actuarial Experience Loss		336,496,770	29		25,614,213	
5.	6/30/2010	Actuarial Experience Loss and Change in Actuarial Assumptions		665,932,310	30		50,154,290	
6.	Total		\$	1,274,486,619		\$	97,171,196	

 $<sup>^{1}</sup>$  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 S		
Valuation Date	Effective Date	<b>Contribution Rate</b>	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%	8.8%

 $<sup>^1</sup>$  Valuation results prior to June 30, 2010 were calculated by the prior actuary.  $^2$  Rates shown reflect application of the contribution rate smoothing.

# L. Historical Investment Experience

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

### **ACCOUNTING**

	<u>Page</u>
A. Assumptions and Methods Under GASB #25 and #27	19
B. Membership Data	19
C. Total PERF – Statement of Plan Net Assets	20
D. Total PERF – Statement of Changes in Plan Net Assets	21
E. Total PERF – Schedule of Funding Progress	22
F. State – Schedule of Funding Progress	22
G. Political Subdivisions – Schedule of Funding Progress	22
H. Total PERF – Schedule of Employer Contributions	23
I. State – Schedule of Employer Contributions	23
J. Political Subdivisions – Schedule of Employer Contributions	23
K. State – Development of Net Pension Obligation (NPO)	24
L. Political Subdivisions – Development of Net Pension Obligation (NPO)	24
M. State – Three-Year Trend Information	25
N. Political Subdivisions – Three-Year Trend Information	25
O. Solvency Test	26

Indiana PERF

#### 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, 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, 2010

Actuarial Cost Method Entry Age Actuarial Cost Method

Amortization Method Level Dollar

Amortization Period 30 Years

Actuarial Value of Assets 4-Year Smoothed Market Value with 20% Corridor

**Actuarial Assumptions:** 

Investment Rate of Return 7.0% (changed from 7.25% as of June 30, 2009)

Future Salary Increases 4.0% (includes 3.0% wage inflation)

Cost-of-Living Increases 1.0% compounded annually on employer funded pension (changed from 1.5% as of June 30, 2009)

### B. Membership Data

The plan consisted of the following membership as of June 30, 2010, the date of the latest actuarial valuation:

Retired members, beneficiaries and disabled members receiving benefits:	67,166
Terminated vested plan members entitled to but not yet receiving benefits:	14,759
Terminated non-vested plan members entitled to a refund of ASA balance:	88,234
Active Plan Members:	149,877
Total membership:	320,036

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

### C. Total PERF - Statement of Plan Net Assets

1.	l. Assets							
	a.	Cash and Cash Equivalents	\$	954,061,011				
	b.	Securities Lending Collateral		1,849,736,546				
	c.	Receivables						
		i. Contributions Receivable	\$	98,301,351				
		ii. Accrued Investment Income		33,639,666				
		iii. Receivables for Investment Securities		761,559,493				
		iv. Member Loans		-				
		v. Miscellaneous Receivables		387,234				
		vi. Due From Other Governmental Plans		166,998				
		vii. Due From Other Funds		24,309,761				
		viii. Total Receivables	\$	918,364,503				
	d.	Investments						
		i. Debt Securities	\$	3,008,153,768				
		ii. Equity Securities		3,613,563,684				
		iii. Mutual Funds		997,402,635				
		iv. Other Investments		1,969,994,919				
		v. Total Investments	\$	9,589,115,006				
	e.	Capital Assets		7,993,077				
	f.	Total Assets: $(1)(a) + (1)(b) + (1)(c) + (1)(d) + (1)(e)$	\$	13,319,270,143				
2.	Lia	bilities						
	a.	Accounts Payable	\$	12,743,135				
	b.	Salaries and Benefits Payable		932,176				
	c.	Investments Payable		872,792,811				
	d.	Securities Lending Collateral		1,849,736,546				
	e.	Due To Other Governmental Plans		1,370,570				
	f.	Due To Other Funds		45,523				
	g.	Total Current Liabilities	\$	2,737,620,761				
	h.	Compensated Absences - Long Term		329,969				
	i.	Total Liabilities: $(2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) + (2)(g) + (2)(h)$	\$	2,737,950,730				
3.	Net	t Assets Held in Trust for Pension Benefits: (1)(f) - (2)(i)	\$	10,581,319,413				

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

### D. Total PERF – Statement of Changes in Plan Net Assets

1.	Net Assets as of June 30, 2009	\$ 9,442,335,540
2.	Revenue (Additions)	
	a. Contributions	
	i. Member Contributions	\$ 158,089,692
	ii. Employer Contributions	331,089,590
	iii. Other Contributions	 
	iv. Total Contributions	\$ 489,179,282
	b. Investment Income/Loss	
	i. Investment Income/Loss	\$ 1,344,183,406
	ii. Securities Lending Income	9,600,601
	iii. Securities Lending Expenses	(2,898,624)
	iv. Other Investment Expenses	 (53,342,155)
	v. Net Investment Income	\$ 1,297,543,228
	c. Other Additions	
	i. Intergovernmental Transfers	\$ 2,339,099
	ii. Miscellaneous Income	 61,417
	iii. Total Other Additions	\$ 2,400,516
	d. Total Revenue (Additions): $(2)(a)(iv) + (2)(b)(v) + (2)(c)(iii)$	\$ 1,789,123,026
3.	Expenses (Deductions)	
	a. Pension and Disability Benefits	\$ 579,710,876
	b. Death, Survivor, and Funeral Benefits	-
	c. Distributions of Contributions and Interest	39,632,358
	d. Intergovernmental Transfers	5,837,217
	e. Pensions Relief Distributions	-
	f. Local Unit Withdrawals	-
	g. Administrative Expenses	24,958,702
	h. Total Expenses (Deductions): $(3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e) + (3)(f) + (3)(g)$	\$ 650,139,153
4.	Changes in Net Assets Held in Trust for Pension Benefits: (2)(d) - (3)(h)	\$ 1,138,983,873
5.	Net Assets as of June 30, 2010: (1) + (4)	\$ 10,581,319,413

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

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

(\$ in Thousands)

1.			2. 3.			4.			6.	7.	
Actuarial Valuation	ation Actuarial		A -4		I I C	nded Actuarial	Funded		Annual	UAAL as a	
Valuation Date June 30						Liability (UAAL)	runded Ratio		Anticipated Payroll		
Date Julie 30		Value of Assets		ability (AAL)	Accrueu	(3) - (2)	(2) / (3)		Payron	% of Payroll (4) / (6)	
2005	\$	10,471,937	s	10,858,322	s	386,385	96.4%	\$	4,318,450	8.9%	
2006	ŷ.	11,177,971	Ÿ	11,450,928	Ÿ	272,957	97.6%	Ÿ	4,322,180	6.3%	
2007		12,220,934		12,439,798		218,864	98.2%		4,385,676	5.0%	
2008		12,780,116		13,103,221		323,105	97.5%		4,600,354	7.0%	
2009		12,569,336		13,506,280		936,944	93.1%		4,931,423	19.0%	
2010		12,357,199		14,506,052		2,148,853	85.2%		4,896,013	43.9%	
				F. Stat	<u>e – Schedı</u>	ıle of Funding Pro	gress 1, 2				
						n Thousands)					
1.		2.		3.		4.	5.		6.	7.	
Actuarial		Non-Retired	1	Non-Retired			Non-Retired		Annual		
Valuation		Actuarial	Act	uarial Accrued	Unfu	nded Actuarial	AAL Funded		Anticipated	UAAL as a	
Date June 30	Date June 30 Value of Assets		Liability (AAL)		Accrued Liability (UAAL)		Ratio	Payroll		% of Payroll	
						(3) - (2)	(2) / (3)			(4) / (6)	
2005	\$	2,145,805	\$	2,189,337	\$	43,532	98.0%	\$	1,645,248	2.6%	
2006		2,169,619		2,210,377		40,757	98.2%		1,592,207	2.6%	
2007		2,350,652		2,335,082		(15,570)	100.7%		1,573,566	(1.0%)	
2008		2,469,432		2,513,791		44,360	98.2%		1,661,248	2.7%	
2009		2,121,550		2,443,039		321,489	86.8%		1,749,781	18.4%	
2010		1,803,664		2,678,031		874,367	67.4%		1,730,480	50.5%	
				G. Political Sul		– Schedule of Fun	ding Progress 1, 2				
					(\$ i	n Thousands)					
1.		2.		3.		4.	5.		6.	7.	
Actuarial		Non-Retired		Non-Retired			Non-Retired		Annual		
Valuation		Actuarial		uarial Accrued		nded Actuarial	AAL Funded		Anticipated	UAAL as a	
Date June 30		Value of Assets	Li	ability (AAL)	Accrued	Liability (UAAL)	Ratio		Payroll	% of Payroll	
						(3) - (2)	(2) / (3)			(4) / (6)	
2005											
2006											
2007	\$	3,155,717	\$	3,390,151	\$	234,434	93.1%	\$	2,812,110	8.3%	
2008		3,388,987		3,667,733		278,745	92.4%		2,939,106	9.5%	
2009		3,167,211		3,782,666		615,455	83.7%		3,181,642	19.3%	
2010		2,841,372		4,115,859		1,274,487	69.0%		3,165,533	40.3%	

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

<sup>&</sup>lt;sup>2</sup> Excludes assets and actuarial accrued liabilities attributable to member ASA balances and members in pay status.

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

#### H. Total PERF - Schedule of Employer Contributions 1

(\$ in Thousands)

	2.		3.	4.
<b>Annual Required</b>			Actual	
Contri	ibution (ARC)	Employ	er Contribution	% of ARC
				(3) / (2)
\$	212,658	\$	206,323	97.0%
	248,120		230,357	92.8%
	275,171		260,150	94.5%
	291,397		303,877	104.3%
	316,059		323,151	102.2%
	360,183		331,090	91.9%
	Contri	S 212,658 248,120 275,171 291,397 316,059	Contribution (ARC) Employ  \$ 212,658 \$ 248,120 275,171 291,397 316,059	Annual Required Contribution (ARC) Employer Contribution  \$ 212,658 \$ 206,323 248,120 230,357 275,171 260,150 291,397 303,877 316,059 323,151

#### I. State - Schedule of Employer Contributions 1

(\$ in Thousands)

1.		۵.		ა.	4.
Plan Year Ending	Annual Required			Actual	
June 30	Contri	bution (ARC)	Employ	er Contribution	% of ARC
					(3) / (2)
2005	\$	69,647	\$	62,760	90.1%
2006		87,947		72,890	82.9%
2007		96,430		89,801	93.1%
2008		99,135		106,867	107.8%
2009		107,981		111,214	103.0%
2010		118,200		111,555	94.4%

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

(\$ in Thousands)

1. Plan Year Ending	Annı	2. 1al Required		3. Actual	4.
June 30	Contri	bution (ARC)	Employ	er Contribution	% of ARC
					(3) / (2)
2005	\$	143,011	\$	143,563	100.4%
2006		160,173		157,467	98.3%
2007		178,741		170,349	95.3%
2008		192,262		197,010	102.5%
2009		208,078		211,937	101.9%
2010		241,983		219,535	90.7%

 $<sup>^{1}</sup>$  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

(\$ in Thousands)

1.		2.		3.		4.	5.		6.		7.		8.		9.		10.
Plan Year		Annual	I	nterest					Actual		Actual		NPO at		NPO at		
Ending	R	equired	on	NPO at		ARC	Amortization	Ne	t Pension	E	Employer	C	hange	В	eginning	I	NPO at
June 30	Contri	bution (ARC)	Disc	ount Rate	Adj	justment	Factor	Co	st (NPC)	Co	ntribution	iı	n NPO		of Year	En	d of Year
					(9	9) / (5)		(2)	+ (3) - (4)			(	6) - (7)			(8	3) + (9)
2008	\$	99,135	\$	(3,868)	\$	(4,408)	12.1037	\$	99,675	\$	106,867	\$	(7,192)	\$	(53,349)	\$	(60,541)
2009		107,981		(4,389)		(5,002)	12.1037		108,594		111,214		(2,620)		(60,541)		(63,161)
2010		118.200		(4,579)		(5,218)	12.1037		118.839		111.555		7,284		(63,161)		(55,877)

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

(\$ in Thousands)

1.		2.		3.		4.	5.		6.		7.		8.		9.		10.		11.
Plan Year		Annual	Iı	nterest							Actual	Adj	ustment				NPO at		
Ending	R	Required	on	NPO at		ARC	Amortization	n No	et Pension	E	mployer	for Wit	hdrawn and	C	hange	В	eginning		NPO at
June 30	Contri	bution (ARC)	Disc	ount Rate	Ad	ustment	Factor	C	ost (NPC)	Co	ntribution	Merg	ged Units <sup>2</sup>	ir	n NPO		of Year	Er	nd of Year
			-		(9	9) / (5)		(2)	+ (3) - (4)			(	6) - (7)	(6) -	(7) + (8)			(	9) + (10)
2008	\$	192,262	\$	(8,099)	\$	(9,229)	12.103	7 \$	193,392	\$	197,010	\$	5,377	\$	1,759	\$	(111,707)	\$	(109,948)
2009		208,078		(7,971)		(9,084)	12.103	7	209,191		211,937		3,268		522		(109,948)		(109,426)
2010		241,983		(7,933)		(9,041)	12.103	7	243,091		219,535		1,440		24,996		(109,426)		(84,430)

24 Indiana PERF **PwC** 

 $<sup>^2\</sup> Individual\ Political\ Subdivisions\ can\ with draw\ from\ the\ plan\ or\ merge\ with\ other\ Political\ Subdivisions\ which\ prevents\ the\ NPO\ from\ reconciling\ year\ over\ year.$ 

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

### M. State - Three-Year Trend Information 1

(\$ in Thousands)

1.		2.		3.	4.
Plan Year				Actual	
Ending	Ne	et Pension	E	mployer	
June 30	Co	ost (NPC)	Co	ntribution	% of NPC
					(3) / (2)
2008	\$	99,675	\$	106,867	107.2%
2009		108,594		111,214	102.4%
2010		118,839		111,555	93.9%

# N. Political Subdivisions - Three-Year Trend Information <sup>1</sup>

(\$ in Thousands)

1.		2.		3.	4.
Plan Year				Actual	
Ending	Ne	t Pension	E	mployer	
June 30	Co	ost (NPC)	Cor	ntribution	% of NPC
					(3) / (2)
2008	\$	193,392	\$	197,010	101.9%
2009		209,191		211,937	101.3%
2010		243,091		219,535	90.3%

 $<sup>^{1}</sup>$  Results were calculated by the prior actuary.

O. Solvency Test <sup>1</sup>
Portion of Actuarial Liability Provided by Assets
(\$\\$ in Thousands)

1.	2.		3.			4.		5.		6.	
					No	on-Retired	To	otal Actuarial			
As of		ASA	Retired and		Memb	ers (Employer		Accrued	Ac	tuarial Value	
June 30		Balances	E	Beneficiaries	Financed Portion)		Liabilities		of Assets		
2005	\$	2,382,280	\$	3,301,265	\$	5,174,777	\$	10,858,322	\$	10,471,937	
		100.0%		100.0%		92.5%		96.4%			
2006		2,515,984		3,648,764		5,286,181		11,450,929		11,177,971	
		100.0%		100.0%		94.8%		97.6%			
2007		2,707,176		4,007,389		5,725,233		12,439,798		12,220,934	
		100.0%		100.0%		96.2%		98.2%			
2008		2,694,331		4,227,366		6,181,524		13,103,221		12,780,116	
		100.0%		100.0%		94.8%		97.5%			
2009		2,669,318		4,611,257		6,225,705		13,506,280		12,569,336	
		100.0%		100.0%		85.0%		93.1%			
2010		2,780,570		4,931,592		6,793,890		14,506,052		12,357,199	
		100.0%		100.0%		68.4%		85.2%			

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

### **CENSUS DATA**

	<u>Page</u>
A. Reconciliation of Participant Data	27
B. Census Information	28
C. Schedule of Active Member Valuation	29
D. Schedule of Retirees, Beneficiaries, and Disabled Members	30
E. Distribution of Active Members by Age and Service	31
F. Distribution of Inactive Vested Members by Age and Service	32
G. Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired	33

Indiana PERF

### A. Reconciliation of Participant Data 1

#### Inactive Non-Vested

		mactive room vester	u				
	Actives	ASA Balance	<b>Inactive Vested</b>	Disabled	Retired	Beneficiary	Total
Prior Actuary Total as of June 30, 2009	147,792	Not Valued	10,670	4,359	52,669	8,071	Not Valued
Adjustment	179	Not Valued			(51)		128
PwC Total as of June 30, 2009	147,971	85,381	10,670	4,359	52,618	8,071	309,070
New Entrants	9,711	-	-	-	-	-	9,711
Rehires	550	(2)	(428)	(22)	(613)	-	(515)
Non-Vested Terminations	(3,964)	4,305	-	-	-	-	341
Vested Terminations	(1,633)	-	1,638	(5)	-	-	0
Retirements	(2,351)	(9)	(1,252)	(36)	4,127	-	479
Disablements	(171)	(1)	(135)	363	-	-	56
Death with Beneficiary	(52)	(64)	(65)	(49)	(470)	681	(19)
Death without Beneficiary	-	-	(425)	(128)	(1,520)	(420)	(2,493)
Refunds	(3,136)	(1,376)	-	-	-	-	(4,512)
Data Adjustments <sup>2</sup>	2,952	<u> </u>	4,756	(1)	175	36	7,918
Total as of June 30, 2010	149,877	88,234	14,759	4,481	54,317	8,368	320,036

<sup>&</sup>lt;sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. member may be a retiree and a beneficiary).

<sup>&</sup>lt;sup>2</sup> Most data adjustments are member records that were not included in the June 30, 2009 valuation date file provided by the prior actuary, but were included in the June 30, 2010 data received from Indiana PERF.

# **B.** Census Information <sup>1,2</sup>

		Jui	ne 30, 2009	J	une 30, 2010
1.	Active				
	a. Number				
	i. State		46,749		48,220
	ii. Political Subdivisions		101,043		101,657
	iii. Total		147,792		149,877
	b. Average Age		47.3		47.5
	c. Average Years of Service		10.9		11.2
	d. Covered Payroll of Actives				
	i. State		1,749,780,803		1,730,479,696
	ii. Political Subdivisions		3,181,642,137		3,165,532,884
	iii. Total	\$	4,931,422,940	\$	4,896,012,580
2.	Inactive - Vested				
	a. Number		10,670		14,759
	b Average Age				53.9
	c. Average Years of Service				15.1
3.	Inactive - Non-Vested				
	a. Number				88,234
4.	Retiree/Beneficiary/Disabled				
	a. Number		65,099		67,166
	b. Average Age				72.6
	c. Annual Benefits Payable	\$	477,552,507	\$	498,199,312

 $<sup>^{1}</sup>$  Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. member may be a retiree and a beneficiary).

 $<sup>^{2}\,</sup>$  Valuation results prior to June 30, 2010 were calculated by the prior actuary.

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

(\$ in Thousands)

1.	2.		3.	4.	5.
			Annual		Annual
As of	Active		Payroll	Average	Percent
June 30	Members	(\$ i	n 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%)

<sup>&</sup>lt;sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. member may be a retiree and a beneficiary).

<sup>&</sup>lt;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

(\$ in Thousands)

1.	2.		3.	4.		5.	6.		7.	8.		9.
	Ac	lded		Ren	noved		End	of Year				
		A	Annual		A	Annual			Annual	% Increase in	A	verage
Year Beginning		All	lowances		All	owances		A	lowances	Annual	A	nnual
June 30	Number	(\$ in '	Thousands)	Number	(\$ in '	Thousands)	Number	( <u>\$ in</u>	Thousands) <sup>3</sup>	Allowances	Allo	owances
2004	4,499	\$	35,845	1,732	\$	8,358	57,121	\$	354,285	8.8%	\$	6,202
2005	3,403		29,572	2,241		14,440	58,283		377,611	6.6%		6,479
2006	4,633		42,653	2,584		15,229	60,332		412,745	9.3%		6,841
2007	5,376		43,915	3,284		18,022	62,424		436,749	5.8%		6,996
2008	6,047		55,726	3,372		19,103	65,099		477,553	9.3%		7,336
2009	4,827		39,214	2,760		19,022	67,166		498,199	4.3%		7,417

<sup>&</sup>lt;sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. member may be a retiree and a beneficiary).

 $<sup>^{2}\,</sup>$  Valuation results prior to June 30, 2010 were calculated by the prior actuary.

<sup>&</sup>lt;sup>3</sup> End of year annual allowances are not equal to the prior end of year annual allowances plus addition and less removals because of data changes and cost-of-living increases.

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

Attained		Distribution of Active Members by Age and Service as of June 30, 2010									
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	1,656	2,585	87	9							4,337
25-29	1,665	7,544	1,930	84							11,223
30-34	1,037	5,339	3,941	1,477	33	1					11,828
35-39	981	5,047	3,858	3,092	1,004	55					14,037
40-44	970	5,111	4,224	3,232	2,301	1,139	50				17,027
45-49	908	5,049	4,947	4,456	2,772	2,539	1,319	199	1	1	22,191
50-54	743	4,250	4,521	4,832	3,478	3,034	2,084	1,911	157	2	25,012
55-59	581	3,323	3,607	3,877	3,332	3,296	1,881	1,865	938	72	22,772
60-64	290	2,142	2,497	2,486	2,090	2,272	1,279	1,084	668	245	15,053
65-69	105	630	942	838	615	612	347	347	161	98	4,695
70&Up	48	336	393	353	303	113	56	51	26	23	1,702
Total	8,984	41,356	30,947	24,736	15,928	13,061	7,016	5,457	1,951	441	149,877

Indiana PERF 31 PwC

<sup>&</sup>lt;sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. member may be a retiree and a beneficiary).

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

Attained		Distribution of Inactive Vested Members by Age and Service as of June 30, 2010						
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			1					1
25-29			2					2
30-34			124					124
35-39			565	46	1			612
40-44			974	251	35			1,260
45-49			1,462	621	236	42	1	2,362
50-54			1,798	941	401	193	63	3,396
55-59			1,936	1,083	541	208	54	3,822
60-64			1,720	457	200	64	42	2,483
65-69			279	112	46	23	27	487
70&Up			92	55	29	21	13	210
Total			8,953	3,566	1,489	551	200	14,759

<sup>&</sup>lt;sup>1</sup> Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. member may be a retiree and a beneficiary).

# G. <u>Distribution of Retired Members</u>, <u>Beneficiaries</u>, <u>and 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	ne 30, 2010
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	21	11	1					33
40-44	36	37	14	4				91
45-49	93	84	44	20				241
50-54	649	221	117	86	5			1,078
55-59	2,541	881	200	130	26	5	1	3,784
60-64	5,537	2,209	800	160	38	9	4	8,757
65-69	6,802	4,039	1,604	555	66	18	8	13,092
70-74	2,613	5,247	3,317	1,141	360	35	24	12,737
75-79	542	1,669	4,710	2,363	705	221	34	10,244
80-84	172	522	1,289	3,872	1,808	426	208	8,297
85-89	34	149	359	867	2,849	1,033	338	5,629
90&Up	17	24	50	150	461	1,528	953	3,183
Total	19,057	15,093	12,505	9,348	6,318	3,275	1,570	67,166

 $<sup>^{1}</sup>$  Headcounts reflect the record counts used in the valuation, which may include duplicate records for members (e.g. member may be a retiree and a beneficiary).

## ACTUARIAL ASSUMPTIONS AND METHODS

	<u>Page</u>
A. Actuarial Assumptions	34
B. Actuarial Methods	38

Indiana PERF

### A. Actuarial Assumptions

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 and contribution rates (i.e. the Actual Rate) 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, though we recommend periodic review of the contribution rate smoothing rules to ensure that funding of the benefits is not unreasonably deferred.

Interest Rate / Investment Return 7.0% (net of administrative and investment expenses)

Interest on Member ASA Balances 7.0% per year

Future Salary Increases 4.0% per year

Inflation 3.0% per year

Cost of Living Increases 1.0% per year in retirement

Mortality (Healthy and Disabled) 2008 IRS Static Mortality projected five (5) years with Scale AA

Disability Based on 2000-2005 experience for males and 1995-2000 experience for females. For females, 2000-

2005 experience was consistent with 1995-2000 experience. 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%

## A. Actuarial Assumptions (continued)

Termination

Select and ultimate tables based on PERF experience 2000-2005. Illustrative rates shown below:

State (Male)				Ser	vice		
	Age	0	1	2	3	4	5+
	20	32.0%	15.0%	5.0%	3.0%	3.0%	2.0%
	30	27.0%	10.0%	5.0%	3.0%	3.0%	2.0%
	40	22.0%	7.0%	5.0%	3.0%	3.0%	2.0%
	50	22.0%	7.0%	5.0%	3.0%	3.0%	2.0%
	60	23.0%	7.0%	5.0%	3.0%	3.0%	2.0%
	70+	27.5%	16.0%	5.0%	3.0%	3.0%	2.0%
State (Female)				Ser	vice		
	Age	0	1	2	3	4	5+
	20	33.0%	14.0%	5.0%	4.0%	3.0%	2.0%
	30	23.0%	11.5%	5.0%	4.0%	3.0%	2.0%
	40	21.0%	9.0%	5.0%	4.0%	3.0%	2.0%
	50	21.0%	9.0%	5.0%	4.0%	3.0%	2.0%
	60	23.0%	9.0%	5.0%	4.0%	3.0%	2.0%
	70+	27.5%	9.0%	5.0%	4.0%	3.0%	2.0%
Political Subdivisions (Male)				Ser	vice		
	Age	0	1	2	3	4	5+
	20	27.0%	14.0%	3.0%	3.0%	2.0%	2.0%
	30	17.0%	9.0%	3.0%	3.0%	2.0%	2.0%
	40	17.0%	7.0%	3.0%	3.0%	2.0%	2.0%
	50	17.0%	7.0%	3.0%	3.0%	2.0%	2.0%
	60	17.0%	7.0%	3.0%	3.0%	2.0%	2.0%
	70+	17.0%	7.0%	3.0%	3.0%	2.0%	2.0%
Political Subdivisions (Female)				Ser	vice		
	Age	0	1	2	3	4	5+
	20	27.0%	15.0%	5.0%	4.0%	3.0%	2.0%
	30	17.0%	10.0%	5.0%	4.0%	3.0%	2.0%
	40	17.0%	8.0%	5.0%	4.0%	3.0%	2.0%
	50	17.0%	8.0%	5.0%	4.0%	3.0%	2.0%
	60	17.0%	8.0%	5.0%	4.0%	3.0%	2.0%
	70+	17.0%	8.0%	5.0%	4.0%	3.0%	2.0%

### A. Actuarial Assumptions (continued)

Retirement

Based on PERF experience 2000-2005. Illustrative rates shown below:

			Ser	vice		
Age	10	15	20	30	40	45
50	0.0%	2.6%	2.6%	2.6%	2.6%	2.6%
55	0.0%	6.5%	6.5%	24.0%	24.0%	24.0%
60	0.0%	13.0%	13.0%	13.5%	17.0%	17.0%
65	42.9%	42.9%	42.9%	42.9%	42.9%	42.9%
70	39.0%	39.0%	39.0%	39.0%	39.0%	39.0%
75+	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Decrement Timing** 

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

Spouse/Beneficiary

90% of members are assumed to be married or to have a dependent beneficiary. Males are assumed to be three (3) years older than their spouses.

**ASA Withdrawal** 

50% of active members are assumed to withdraw their ASA balance upon termination or retirement. 100% of inactive members are assumed to withdraw their ASA balance. The assumptions used to annuitize ASA balances are different than the valuation assumptions and create a small cost to the plan.

**Data Assumptions** 

Actives with either no date of birth and/or no gender are assumed to be age 47 and/or male. Inactives with either no date of birth and/or no gender are assumed to be age 46 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 5-year certain and life annuities. Retirees and disabled members that are married and do not have a retirement option listed are assumed to elect a 100% joint and survivor annuity. Beneficiaries that do not have a retirement option listed are assumed to receive monthly payments for life.

## A. Actuarial Assumptions (continued)

## **Changes in Assumptions**

For the June 30, 2010 valuation, the Board approved the following assumption changes:

- The interest rate (net of administrative and investment expenses) was lowered from 7.25% to 7.0%.
- The cost-of-living increase assumption changed from 1.5% compounded annually to 1.0% compounded annually. No increase is assumed to be applied to annuitized ASA balances.
- The mortality assumption was changed from rates based on PERF experience from 1995-2000 to the IRS 2008 Static Mortality Table projected forward 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 and contribution rates (i.e. the Actual Rate) 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, though we recommend periodic review of the contribution rate smoothing rules to ensure that funding of the benefits is not unreasonably deferred.

#### 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. <u>Employer Contribution Rate Smoothing Methods</u>

The State employer contribution rate is equal to the prior year Actual Rate, plus a portion of the increase (or less a portion of the decrease) between the current year True Rate and the prior year Actual Rate, rounded to the nearest tenth of a percent.

The contribution rate for each Political Subdivision is smoothed and rounded based on the number of active members in the respective Political Subdivision. The Board has approved various resolutions that detail the smoothing methods.

### **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. <u>Changes in Actuarial Methods</u>

For the June 30, 2010 valuation, the Board approved the following method change:

- The AVA was changed from 75% of the expected Actuarial Value, plus 25% of the actual Market Value to a four-year smoothing of gains and losses on the MVA, with a 20% corridor, where the AVA cannot be more than 120% or less than 80% of the Market Value of Assets ("MVA") after the four-year smoothing of gains and losses is applied. This change was made to be consistent with the other PERF plans and to ensure convergence of the AVA and MVA.

## **SUMMARY OF PLAN PROVISIONS**

	<u>Page</u>
A. Summary of Plan Provisions	40

Indiana PERF

## A. 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 creditable service

- Age 60 with 15 or more years of creditable service

- Age 55 with sum of age and creditable service equal to 85 or more  $\,$ 

b. Early Retirement Age 50 with 15 or more years of creditable service

 $c. \quad \ \ Late \ Retirement \qquad \quad Subject \ to \ continued \ employment \ after \ normal \ retirement$ 

d. Disability Retirement 5 or more years of creditable service and qualified for Social Security disability benefits or federal Civil Service

disability benefits

e. Termination 10 or more years of creditable service and no longer active (i.e. vested inactive)

f. Pre-Retirement Death 15 or more years of creditable service if death occurs in service. If death occurs after separating from service,

age 50 with 15 or more years of creditable service

## A. Summary of Plan Provisions (continued)

### **Amount of Benefits**

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

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.

### A. 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.

c. 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.

d. Joint with Two-Thirds Survivor Benefits (Option 40)

Member will be paid a monthly benefit for life. After death, two-thirds (2/3) of the benefit will be paid to the beneficiary for their lifetime.

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.

### A. 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** with ASA Cash Refund (Option 71)

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

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

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.

## A. 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	The member withdraws the non-taxable (1986 Tax Basis) portion of their ASA in the form of a direct rollover, a
	Basis Portion of ASA	complete distribution, or a partial rollover to a qualified plan, and then receives the balance of the account as a
	and Combine Taxable	part of their monthly payment.
	Portion with	
	Pension Benefit	

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 No changes since prior valuation.

# <u>SECTION VII - DEFINITIONS OF TECHNICAL TERMS</u>

# **Definitions of Technical Terms**

<u>Page</u>

A.	. Definitions of Technical Terms	45

Indiana PERF

### SECTION VII - DEFINITIONS OF TECHNICAL TERMS

### A. Definitions of Technical Terms

Actual Rate	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

True Rate.

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.

### SECTION VII - DEFINITIONS OF TECHNICAL TERMS

### A. Definitions of Technical Terms (continued)

Actuarial Valuation Date The date as of which an actuarial valuation is performed.

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)

Level Dollar Amortization Method

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.

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.

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 Assets

### **SECTION VII - DEFINITIONS OF TECHNICAL TERMS**

### A. 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.

True Rate

The precise actuarial contribution rate (not less than 0.0%) determined by summing the Normal Cost and amortization of unfunded Actuarial Accrued Liability and dividing by anticipated payroll.