

# *Indiana Public Retirement System*

Legislators' Defined Benefit Fund

Actuarial Valuation as of June 30, 2017





November 8, 2017

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

# Re: Certification of the Actuarial Valuations of the Indiana Public Retirement System as of June 30, 2017

**Dear Board of Trustees:** 

Actuarial valuations are performed annually as required under statute for the Indiana Public Retirement System ("INPRS") defined benefit pension plans. The results of the June 30, 2017 actuarial valuations for all plans other than the Teachers' Retirement Fund are presented in individual valuation reports pursuant to the engagement letter between INPRS and PricewaterhouseCoopers LLP ("PwC"). These plans (the "Plans") include:

- Public Employees' Retirement Fund
- 1977 Police Officers' and Firefighters' Retirement Fund
- Judges' Retirement System
- · Excise, Gaming and Conservation Officers' Retirement Fund
- Prosecuting Attorneys' Retirement Fund
- Legislators' Defined Benefit Fund

The reports are intended to provide the Board of Trustees ("Board") and INPRS staff with information on the funded status of the Plans, development of the contribution rates, and certain financial statement disclosure information. The reports are intended for the sole use and benefit of the Board, and are not intended for reliance by other persons.

For accounting purposes, the actuarial assumptions and methods used in the June 30, 2017 valuations were selected and approved by the Board, and are in accordance with our understanding of GASB No.67.

For funding purposes, employer contribution rates and amounts, as applicable, are adopted annually for each Plan by the Board, per Indiana statutes. The contributions are actuarially determined based on the funding policy, actuarial assumptions, and actuarial methods selected and approved by the Board. Contributions determined by the actuarial valuation become effective either twelve or eighteen months after the valuation date, depending on the applicable participating employer. Therefore, contribution rates and amounts determined by the June 30, 2017 actuarial valuation and adopted by the Board will become effective on either July 1, 2018 or January 1, 2019. 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") of plans that are open to new entrants will be amortized over a period not greater than 20 years for any UAAL arising since June 30, 2015, and 30 years for any UAAL that arose on or before June 30, 2015. For plans that are closed to new entrants, the UAAL will be amortized over a period not greater than 5 years.

• To set contributions that remain stable over time as determined by the Board.

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 and/or adverse experience it should increase over time, until it reaches 100% if contributions equal or exceed the actuarially determined amount. The combined funded ratio for all Plans (excluding the Teachers' Retirement Fund) remains at 84.6%, primarily due to contributions exceeding the actuarially determined amounts and cost-of-living adjustments being less than assumed, offset by the delayed recognition (i.e. smoothing) of favorable investment returns, plan changes, assumption changes, and adverse member experience.



# **Benefit Provisions**

The benefit provisions reflected in the valuation reports are those which were in effect at June 30, 2017, as set forth in Indiana statutes. There were no material changes in benefit provisions since the 2016 valuations except for the following:

- PERF: Per INPRS, ASA annuitizations will be accommodated through a third party annuity provider beginning January 1, 2018, compared to the previously effective date of April 1, 2017.
- 1977 Fund: Per 2017 House Enrolled Act No. 1617, a member who experiences a catastrophic physical personal injury in the line of duty will receive an enhanced disability retirement benefit.
- PARF: Per Senate Enrolled Act No. 265, the PERF benefit offset reflected in the PARF benefit formula was changed to be the actual PERF benefit amount the member is receiving for members who commence their PERF benefit before their PARF benefit.

# **Assets and Member Data**

The valuations were based on asset values of the trust funds as of June 30, 2017 and member census data as of June 30, 2016, adjusted for certain activity during fiscal year 2017 where applicable. All asset information and member data were provided by INPRS and INPRS takes responsibility for the accuracy and completeness of the information provided. 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 were adopted by the Board pursuant to an experience study completed in April 2015, which reflected the experience period from July 1, 2010 through June 30, 2014, as well as data from earlier studies. The actuarial assumptions used in the June 30, 2017 valuations were the same assumptions used in the 2016 valuations, except for the mortality assumption for disabled members. The RP-2014 (with MP-2014 improvement removed) Disability Mortality Table was assumed instead of the RP-2014 (with MP-2014 improvement removed) Healthy Annuitant Mortality Tables with collar adjustments. Other minor assumption changes and refinements were made pursuant to the actuarial audit completed since the prior year and are summarized in the report.

The June 30, 2017 valuations incorporate member census data as of June 30, 2016, adjusted for certain activity during fiscal year 2017. The valuation results from June 30, 2016 were rolled-forward to June 30, 2017 to reflect benefit accruals during the year less benefits paid.

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. 67 and No. 68 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 purposes stated therein by the intended parties.

# 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, 2017, based on the underlying census data and asset information provided by INPRS and the selected assumptions and methods. This information is presented in several schedules and exhibits in this report, including the following:

**Financial Section:** 

- Note 1 Tables of Plan Membership (Included in the Historical Summary)
- Note 7 Net Pension Liability and Actuarial Information Defined Benefit Plans (Included in the Accounting Section)
- Schedule of Changes in Net Pension Liability and Plan Fiduciary Net Position
- Schedule of Contributions (Actuarially Determined Contribution)
- Schedule of Notes to Required Supplementary Information

# **Actuarial Section:**

- Summary of INPRS Funded Status (Included in the Historical Summary)
- Historical Summary of Actuarial Valuation Results by Retirement Plan (Schedule of Funding Progress Included in the Historical Summary)
- Summary of Actuarial Assumptions, Methods and Plan Provisions
- Analysis of Financial Experience (Included in the Unfunded Actuarial Accrued Liability Reconciliation)
- Solvency Test (Included in the Historical Summary)
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries

# Statistical Section:

- Membership Data Summary (Included in the Historical Summary)
- Ratio of Active Members to Annuitants (Census Counts Included in the Historical Summary)
- Schedule of Benefit Recipients by Type of Benefit Option
- Schedule of Average Benefit Payments



Subject to reliance on the data provided, all estimates are based on information available as of a point in time and are subject to ongoing unforeseen and random events. As such, any reported results must be viewed as having a likely range of variability from the estimate, both up and down. Differences between our estimates and actual results depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Although estimated amounts have not been rounded, no inference should be made regarding the precision of such results.

A range of results, different from those presented in this report could be considered reasonable. Future actuarial measurements may differ significantly from the current measurement presented in this report due to a number of factors including but not limited to: plan experience differing from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methods used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); rounding conventions; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

To the best of our knowledge our actuarial reports are complete and accurate and have 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.

Respectfully submitted,

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The content of this document is limited to the matters specifically addressed herein and does not address any other potential tax consequences, or the potential application of tax penalties, to any matter other than as set forth herein. Our conclusions are not binding upon any taxing authority or the courts and there is no assurance that any relevant taxing authority will not successfully assert a contrary position. In addition, no exceptions (including the reasonable cause exception) are available for any federal or state penalties imposed if any portion of a transaction is determined to lack economic substance or fails to satisfy any similar rule of law, and our advice will not protect you from any such penalties. This document supersedes all prior written or oral advice with respect to the issues addressed in this document and all such prior communications should not be relied upon by any person for any purpose.

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## HIGHLIGHTS OF THE ACTUARY'S REPORT

This report presents the results of the actuarial valuation of the Legislators' Defined Benefit Fund (the "LEDB Fund") and has been prepared to present the current funded status of the Plan, contribution requirements for fiscal year 2019 (July 1, 2018 through June 30, 2019), and certain financial statement disclosure information. The valuation was performed using census data for plan members as of June 30, 2016, adjusted for certain activity during fiscal year 2017 as applicable, as provided by INPRS and summarized in Section IV, asset information as of June 30, 2017 provided by INPRS, the actuarial assumptions and methods approved by the Board and summarized in Section V, and the plan provisions effective June 30, 2017 and summarized in Section VI.

## **Contributions**

The LEDB Fund is a State appropriated fund. All employer contributions are made by the State of Indiana. The estimated actuarially determined contribution for fiscal 2019 is \$239,871, compared to \$236,527 for fiscal 2018. Expenses are included in these amounts and are assumed to be equal to the administrative expenses incurred during the year prior to the valuation date. Based on the results of the June 30, 2016 valuation, the Board requested appropriations from the State of \$237,000 for fiscal 2019 for the 2018-2019 two-year budget cycle.

## **Funded Status**

The funded status of the LEDB Fund is measured by the funded ratio, which is the ratio of the assets available for benefits to a benefit liability measure for the LEDB. 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 five (5) years, the LEDB Fund AAL funded ratio increased from 80.7% at June 30, 2016 to 81.9% at June 30, 2017. The increase is expected as experience gains and losses and other changes affecting the liability valuation were small and largely offsetting.

#### **Investment Experience**

For the fiscal year ending June 30, 2017, the INPRS actual time-weighted return net of fees was 7.9%. Based on the value of assets allocated to the LEDB Fund as of the prior valuation date and contribution and benefit payment activity during the year, the allocation of returns to the LEDB Fund represent a return of approximately 6.0% on market value and 3.1% on actuarial value. The return on actuarial value is different due to the smoothing of returns greater or less than expected returns over five years.

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

Cost-of-living increases for retired members have historically been granted on an "ad hoc" basis. INPRS has confirmed that no increase in monthly benefits will be provided to retired members, disabled members, or beneficiaries as of January 1, 2018 and January 1, 2019.

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

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

For disabled members, the mortality assumption is updated from the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables to the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables.

#### **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 were no actuarial method changes for the June 30, 2017 valuation.

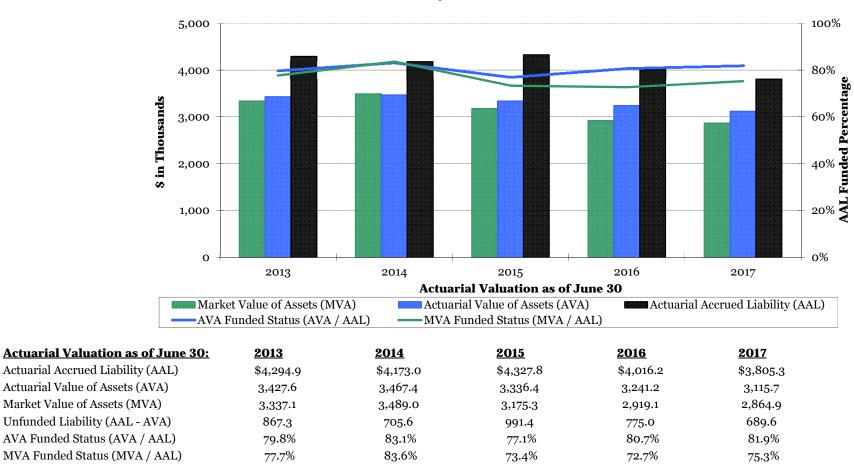
## **Actuarial Audit**

Since the prior actuarial valuation, a comprehensive review of our valuation procedures was performed by a third-party actuarial consulting firm, Nyhart. The results and recommendations from their review, as documented in their report dated March 7, 2017, have been reflected in this valuation and consist of very minor updates to our valuation assumption and methods. The impact on this valuation is shown in Section II.

#### **Governmental Accounting Standards**

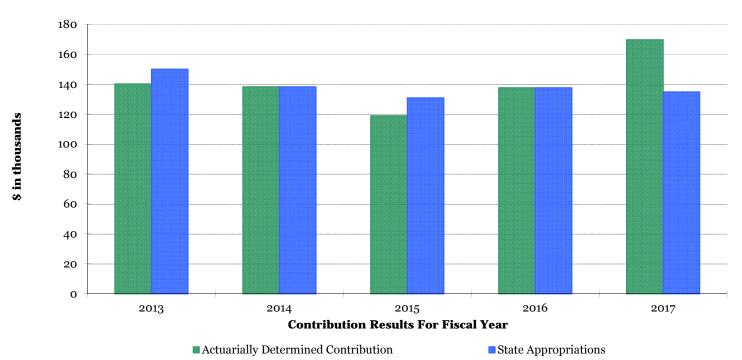
This report contains certain financial statement information, including notes and required supplemental information, prepared in accordance with our understanding of Governmental Accounting Standards No. 67 and No. 68 ("GASB 67" and "GASB 68") in order to assist INPRS with its financial report requirements and to assist INPRS in preparing financial reporting information for participating employers.

#### HISTORICAL SUMMARY



#### **LEDB Fund – 5 Year History of Funded Status**

## HISTORICAL SUMMARY (CONTINUED)



## LEDB Fund – 5 Year History of Contributions

Contribution Results For Fiscal Year:	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Actuarially Determined Contribution	\$140.2	\$138.3	\$118.9	\$137.6	\$169.7
State Appropriations	\$150.0	\$138.3	\$130.9	\$137.6	\$134.8
ADC% Contributed	107.0%	100.0%	110.1%	100.0%	79.4%

#### HISTORICAL SUMMARY (CONTINUED)

# Summary of Valuation Results<sup>1</sup>

Valuation Date	Ju	ne 30, 2013	Ju	ne 30, 2014	Ju	ne 30, 2015	Ju	ne 30, 2016	Ju	ine 30, 2017
Development of Actuarially Determined Contribution Amount:										
1. Normal Cost (Beginning of Year)	\$	-	\$	-	\$	-	\$	-	\$	-
2. Unfunded Actuarial Accrued Liability Amortizations										
a. UAAL Balance	\$	867,333	\$	705,617	\$	991,370	\$	775,040	\$	689,562
b. Annual Amortization		84,671		75,111		98,539		175,889		187,229
3. Provision for Expenses <sup>2</sup>	\$	34,256	\$	62,488	\$	71,195	\$	60,638	\$	52,642
4. Actuarially Determined Contribution: (1) + (2)(b) + (3)	\$	118,927	\$	137,599	\$	169,734	\$	236,527	\$	239,871
<u>Fiscal Year</u>		2015		2016		2017		2018		2019
State Appropriations <sup>3</sup>	\$	130,900	\$	138,000	\$	134,800	\$	237,000	\$	269,000

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

<sup>2</sup> INPRS elected to set equal to the administrative expenses actually incurred in the prior year.

<sup>&</sup>lt;sup>3</sup> LEDB is a State appropriated fund. Employer contribution amounts are expected to be paid by the State of Indiana.

## HISTORICAL SUMMARY (CONTINUED)

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

	Jun	e 30, 2013	Jun	e 30, 2014	Jur	ne 30, 2015	Jun	e 30, 2016	Jun	e 30, 2017
Census Information										
Active										
Number		24		24		17		11		11
Average Age		70.0		70.0		71.6		71.8		72.8
Average Years of Service <sup>2</sup>		7.2		7.2		7.6		7.5		7.5
Inactive										
Number		9		9		14		12		12
Average Age		67.6		67.6		66.7		67.9		68.9
Average Years of Service <sup>2</sup>		7.2		7.2		7.0		7.3		7.3
Retiree/Beneficiary/Disabled										
Number		68		68		68		74		72
Average Age		75.1		75.1		76.2		75.9		76.8
Annual Benefits Payable <sup>3</sup>	\$	364,625	\$	364,625	\$	365,629	\$	364,024	\$	356,864

<sup>&</sup>lt;sup>1</sup> The valuation results beginning as of June 30, 2014 were calculated using census data as of the prior year end, adjusted for certain activity during the current fiscal year. <sup>2</sup> Average based on creditable service earned before November 8, 1989.

<sup>&</sup>lt;sup>3</sup> Figures shown reflect cost-of-living increases effective January 1 following the date of the census data, if provided.

## HISTORICAL SUMMARY (CONTINUED)

## **Summary of Valuation Results (Continued)**

	June 30, 2		June 30, 2014		June 30, 2015		June 30, 2016		June 30, 2017	
Actuarial Accrued Liability (AAL)										
Retiree/Beneficiary/Disabled	\$	3,191,742	\$	3,076,342	\$	3,212,555	\$	3,207,537	\$	3,013,439
Active and Inactive		1,103,156		1,096,665		1,115,193		808,649		791,814
Total	\$	4,294,898	\$	4,173,007	\$	4,327,748	\$	4,016,186	\$	3,805,253
Actuarial Value of Assets (AVA)										
Retiree/Beneficiary/Disabled	\$	3,191,742	\$	3,076,342	\$	3,212,555	\$	3,207,537	\$	3,013,439
Active and Inactive		235,823		391,048	_	123,823		33,609		102,252
Total	\$	3,427,565	\$	3,467,390	\$	3,336,378	\$	3,241,146	\$	3,115,691
Market Value of Assets (MVA)										
Retiree/Beneficiary/Disabled	\$	3,191,742	\$	3,076,342	\$	3,175,268	\$	2,919,061	\$	2,864,867
Active and Inactive		145,352		412,658						-
Total	\$	3,337,094	\$	3,489,000	\$	3,175,268	\$	2,919,061	\$	2,864,867
Unfunded Actuarial Accrued Liability: AAL	- AVA <sup>1</sup>									
Retiree/Beneficiary/Disabled	\$	-	\$	-	\$	-	\$	-	\$	-
Active and Inactive		867,333		705,617		991,370		775,040		689,562
Total	\$	867,333	\$	705,617	\$	991,370	\$	775,040	\$	689,562
Funded Percentage: AVA / AAL <sup>1</sup>										
Retiree/Beneficiary/Disabled		100.0%		100.0%		100.0%		100.0%		100.0%
Active and Inactive		21.4%		35.7%		11.1%		4.2%		12.9%
Total		79.8%		83.1%		77.1%		80.7%		81.9%
Summary of Assumptions										
Valuation Interest Rate		6.75%		6.75%		6.75%		6.75%		6.75%
Salary Scale		3.0%		3.0%		2.25%		2.25%		2.25%
Cost-of-Living Assumption		1.0%		1.0%		1.0%		1.0%		1.0%

<sup>1</sup> For purposes of this summary, in determining the unfunded actuarial accrued liability and funded percentage, the assets are allocated first to the retiree/beneficiary/disabled liability and then to the active/inactive liability.

# FUNDING

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## A. Development of Funded Status

		Jur	ne 30, 2016	June 30, 2017		
1.	Actuarial Accrued Liability					
	a. Retirees, Beneficiaries, and Disableds	\$	3,207,537	\$	3,013,439	
	b. Actives and Inactives		808,649		791,814	
	c. Total: (1)(a) + (1)(b)	\$	4,016,186	\$	3,805,253	
2.	Actuarial Value of Assets <sup>1</sup>					
	a. Retirees, Beneficiaries, and Disableds	\$	3,207,537	\$	3,013,439	
	b. Actives and Inactives		33,609		102,252	
	c. Total: (2)(a) + (2)(b)	\$	3,241,146	\$	3,115,691	
3.	Unfunded Actuarial Accrued Liability <sup>1</sup>					
	a. Retirees, Beneficiaries, and Disableds: (1)(a) - (2)(a)	\$	-	\$	-	
	b. Actives and Inactives: (1)(b) - (2)(b)		775,040		689,562	
	c. Total: (1)(c) - (2)(c)	\$	775,040	\$	689,562	
4.	Funded Percentage <sup>1</sup>					
	a. Retirees, Beneficiaries, and Disableds: (2)(a) / (1)(a)		100.0%		100.0%	
	b. Actives and Inactives: $(2)(b) / (1)(b)$		4.2%		12.9%	
	c. Total: (2)(c) / (1)(c)		80.7%		81.9%	

<sup>1</sup> For purposes of this summary, in determining the unfunded actuarial accrued liability and funded percentage, the assets are allocated first to the retiree/beneficiary/disabled liability and then to the active/inactive liability.

## **B. Unfunded Actuarial Accrued Liability Reconciliation**

1. 2.	June 30, 2016 Unfunded Actuarial Accrued Liability Normal Cost	\$ 775,040
3.	Actuarially Determined Contributions <sup>1</sup> Interest of $6.75\%$ on (1) + (2) - (3)	175,889
4. 5.	Expected June 30, 2017 Unfunded Actuarial Accrued Liability (1) + (2) - (3) + (4)	\$ <u>40,443</u> 639,594
6.	Actuarial Value of Assets Experience (Gain)/Loss a. Investment Experience b. Contribution Experience	\$ 118,422 43,862
7.	<ul> <li>Actuarial Accrued Liability Experience (Gain)/Loss</li> <li>a. Actuarial Accrued Liability Experience</li> <li>b. Additional Liability Due to Actuarial Audit Changes<sup>2</sup></li> <li>c. Additional Liability Due to Cost-of-Living Adjustments<sup>3</sup></li> <li>d. Additional Liability Due to Changes in Actuarial Assumptions<sup>4</sup></li> <li>e. Additional Liability Due to Changes in Plan Provisions</li> </ul>	 (47,687) 52 (64,490) (191) -
8.	Total Experience (Gain)/Loss - New Amortization Base (6)(a) + (6)(b) + (7)(a) + (7)(b) + (7)(c) + (7)(d) + (7)(e)	\$ 49,968
9.	Actual June 30, 2017 Unfunded Actuarial Accrued Liability (5) + (8)	\$ 689,562

<sup>&</sup>lt;sup>1</sup> Does not include the provision for expenses included in the prior year actuarially determined contribution calculation.

<sup>&</sup>lt;sup>2</sup> As a result of the actuarial audit that was completed during the plan year, minor updates were made to the valuation of liabilities. The updates include refining the mortality rates used in the valuation to properly reflect the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

<sup>&</sup>lt;sup>3</sup> A Cost-of-Living Adjustment (COLA) will not be granted as of January 1, 2018 and January 1, 2019, compared to the assumed COLA of 1.0%.

<sup>&</sup>lt;sup>4</sup> For disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

# **C. Actuarial Accrued Liability Reconciliation**

1.	June 30, 2016 Actuarial Accrued Liability	\$ 4,016,186	
2.	Normal Cost	-	
3.	Actual Benefit Payments <sup>1</sup>	357,639	
4.	Service Purchases (Employer and Member)	-	
5.	Interest of $6.75\%$ on $(1) + (2) - (3)/2 + (4)/2$	 259,022	
6.	Expected June 30, 2017 Actuarial Accrued Liability	\$ 3,917,569	
	(1) + (2) - (3) + (4) + (5)		
		Dollar Change	Percent Change
7.	(Gain)/Loss Components	 in Liability	in Liability
	a. Actuarial Accrued Liability Experience	\$ (47,687)	(1.2%)
	b. Actuarial Audit Changes <sup>2</sup>	\$ 52	0.0%
	c. Cost-of-Living Adjustment <sup>3</sup>	\$ (64,490)	(1.7%)
	d. Changes in Actuarial Assumptions <sup>4</sup>	\$ (191)	(0.0%)
	e. Changes in Plan Provisions	\$ 	0.0%
	f. Total: $(7)(a) + (7)(b) + (7)(c) + (7)(d) + (7)(e)$	\$ (112,316)	(2.9%)
8.	Actual June 30, 2017 Actuarial Accrued Liability: (6) + (7)(f)	\$ 3,805,253	

<sup>1</sup> Includes net interfund transfers.

<sup>2</sup> As a result of the actuarial audit that was completed during the plan year, minor updates were made to the valuation of liabilities. The updates include refining the mortality rates used in the valuation to properly reflect the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

<sup>3</sup> A Cost-of-Living Adjustment (COLA) will not be granted as of January 1, 2018 and January 1, 2019, compared to the assumed COLA of 1.0%.

<sup>4</sup> For disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

# D. Reconciliation of Market Value of Assets

		Ju	ne 30, 2016	Ju	June 30, 2017	
1.	Market Value of Assets, Prior June 30	\$	3,175,268	\$	2,919,061	
2.	Receipts					
	a. Employer Contributions	\$	137,600	\$	134,800	
	b. Member Contributions		-		-	
	c. Investment Income and Dividends Net of Fees		25,578		221,001	
	d. Security Lending Income Net of Fees		418		286	
	e. Member Reassignments		-		-	
	f. Miscellaneous Income		-		-	
	g. Total Receipts: $(2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f)$	\$	163,596	\$	356,087	
3.	Disbursements					
	a. Benefits Paid During the Year	\$	359,165	\$	357,639	
	b. Refund of Contributions and Interest		-		-	
	c. Administrative Expenses		60,638		52,642	
	d. Member Reassignments		-		-	
	e. Miscellaneous Disbursements		-		-	
	f. Total Disbursements: $(3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e)$	\$	419,803	\$	410,281	
4.	Market Value of Assets, Current June 30: $(1) + (2)(g) - (3)(f)$	\$	2,919,061	\$	2,864,867	
5.	Market Value of Assets Approximate Annual Rate of Return <sup>1</sup>		(1.1%)		6.0%	

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

# E. Reconciliation of Actuarial Value of Assets

1.	Market Value of Assets	\$ 2,919,061			
2.	Market Value of Asset	2,864,867			
3.	<ul><li>Expected Earnings/Ex</li><li>a. Expected Investment</li><li>b. Receipts with Ex</li><li>c. Disbursements with Ex</li></ul>	197,037 139,350 369,709			
4.	Expected Assets, June	30, 2017: (1) +	(3)(a) + (3)(b) - (3)	)(c)	\$ 2,885,739
5.	2016-2017 Gain/(Loss	: (2) - (4)			(20,872)
6.	Smoothing of Gain/(L				
	Year	G	ain/(Loss)	% Unrecognized	
	a. 2016 - 2017	\$	(20,872)	80%	(16,698)
	b. 2015 - 2016	\$	(241,495)	60%	(144,897)
	c. 2014 - 2015	\$	(302,516)	40%	(121,006)
	d. 2013 - 2014	\$	158,885	20%	31,777
7.	Preliminary Actuarial	Value of Assets,	June 30, 2017: (2	) - (6)(a) - (6)(b) - (6)(c)- (6)(d)	\$ 3,115,691
8.	Corridor				
0.	a. 120% of Market V	alue: 1.2 x (2)			3,437,840
	b. 80% of Market V				2,291,894
		uuor oro n ( <u>-</u> )			=,=,=,=,=,=,=
9.	Actuarial Value of Ass	ts, June 30, 20	17: (7), but not gre	ater than (8)(a) or less than (8)(b)	\$ 3,115,691
10.	Actuarial Value of Ass	ts as a Percent	of Market Value:(	9) / (2)	108.8%
11.	Actuarial Value of Ass	ts Approximate	e Annual Rate of In	vestment Return <sup>2</sup>	3.1%

 <sup>&</sup>lt;sup>1</sup> Assumes cash flows occur at mid-year.
 <sup>2</sup> Net of expenses and assuming cash flows occur at mid-year.

# **F. Contributions**

			ine 30, 2016	June 30, 2017	
Develo	pment of Actuarially Determined Contribution:				
1.	Normal Cost (Beginning of Year)	\$	-	\$	-
2.	<ul><li>Unfunded Actuarial Accrued Liability (UAAL) Amortizations</li><li>a. UAAL Balance</li><li>b. Annual Amortization</li></ul>	\$	775,040 175,889	\$	689,562 187,229
3.	Provision for Expenses <sup>1</sup>	\$	60,638	\$	52,642
4.	Actuarially Determined Contribution: $(1) + (2)(b) + (3)^{2}$	\$	236,527	\$	239,871
5.	Fiscal Year Beginning:		July 1, 2017		July 1, 2018
6.	Approved Funding Amount: <sup>2</sup>	\$	237,000	\$	269,000
Expecte	ed Percentage of Actuarially Determined Contribution Contributed: (6) / (4)		100.20%		112.14%

<sup>1</sup> INPRS elected to set equal to the administrative expenses actually incurred in the prior year.

<sup>2</sup> LEDB is a State appropriated fund. Employer contributions amounts are expected to be paid by the State of Indiana.

# G. Unfunded Actuarial Accrued Liability Amortization Schedule

Date Base Established	Reason		emaining Jnfunded	Remaining Period		Amortization Amount
1. 6/30/2016 2. 6/30/2017 Total	Fresh Start Actuarial Experience and Changes in Actuarial Assumptions	<u></u> ¢	639,594 49,968 689,562	4.0 <u>5.0</u> 4.1	- <u> </u>	175,889 <u>11,340</u> \$ 187,229

<sup>1</sup> The weighted average remaining UAAL amortization period is calculated by weighting the remaining amortization period of each base by the amortization amount of each base.

# H. Approximate Annual Rate of Return for Year Ending June 30, 2017<sup>1</sup>

		 Market Value of Assets	Actua	rial Value of Assets
1.	Balance, beginning of year	\$ 2,919,061	\$	3,241,146
2.	Balance, end of year	2,864,867		3,115,691
3.	Total increase: (2) - (1)	(54,194)		(125,455)
4.	Contributions	134,800		134,800
5.	Benefit payments <sup>2</sup>	357,639		357,639
6.	Net additions: (4) - (5)	(222,839)		(222,839)
7.	Net investment increase: (3) - (6)	168,645		97,384
8.	Average assets: $[(1) + (2) - (7)] / 2$	2,807,642		3,129,727
9.	Approximate rate of return: (7) / (8)	6.0%		3.1%

# I. Historical Investment Experience

	Actual Rate of Investm	Actuarial Assumed			
Year Ending June 30	Market Basis <sup>4</sup>	Actuarial Basis <sup>1</sup>	Interest Rate		
2008	(7.6%)	7.8%	7.25%		
2009	(20.6%)	(2.1%)	7.25%		
2010	13.9%	(6.6%)	7.25%		
2011	20.1%	(2.6%)	7.0%		
2012	0.7%	(0.9%)	7.0%		
2013	6.0%	8.1%	6.75%		
2014	13.7%	8.0%	6.75%		
2015	0.0%	3.2%	6.75%		
2016	1.2%	$3.9\%^{-3}$	6.75%		
2017	7.9%	3.1%	6.75%		

<sup>1</sup> Based on individual fund experience. Net of expenses and assuming cash flows occur at mid-year. Approximate Market Value of Assets return is not equal to money-weighted return for GASB purposes shown in Accounting Section.

<sup>2</sup> Includes net interfund transfers.

<sup>3</sup> Net of the impact of changing from four-year to a five-year smoothing.

<sup>4</sup> INPRS actual time-weighted rate of return net of fees for 2012-2017. PERF Consolidated Defined Benefit time-weighted rate of return reported as gross of fees for 2008-2011.

## J. Interest Rate Sensitivity

The investment return assumption (discount rate) 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 Actuarially Determined Contribution Amount (for the fiscal year beginning July 1, 2018) are shown below and on the following page at interest rates from 5.75% to 8.00%, in 0.25% increments.

		1.00% Decrease: (5.75%)	0.75% Decrease: (6.0%)	]	0.50% Decrease: (6.25%)	0.25% Decrease: (6.5%)	A	Current ssumption: (6.75%)
<u>Funded Status</u> Actuarial Accrued Liability	\$	4,084,120	\$ 4,010,823	\$	3,939,987	\$ 3,871,498	\$	3,805,253
Actuarial Value of Assets		3,115,691	 3,115,691		3,115,691	 3,115,691		3,115,691
Unfunded Actuarial Accrued Liability	\$	968,429	\$ 895,132	\$	824,296	\$ 755,807	\$	689,562
Funded Ratio		76.3%	77.7%		79.1%	80.5%		81.9%
<u>Actuarially Determined Contribution Amoun</u> Normal Cost	t	-	-		-	-		-
UAAL Amortization	\$	246,865	\$ 231,363	\$	216,268	\$ 201,562	\$	187,229
Provision for Expenses		52,642	 52,642		52,642	 52,642		52,642
Actuarially Determined Contribution Amount	\$	299,507	\$ 284,005	\$	268,910	\$ 254,204	\$	239,871

<sup>1</sup> Set equal to the administrative expenses incurred in the prior year.

# J. Interest Rate Sensitivity (Continued)

	0.25% Increase: (7.0%)		0.50% Increase: (7.25%)		0.75% Increase: (7.5%)		1.00% Increase: (7.75%)		1.25% Increase: (8.0%)	
<u>Funded Status</u> Actuarial Accrued Liability	\$	3,741,152	\$	3,679,102	\$	3,619,014	\$	3,560,805	\$	3,504,392
Actuarial Value of Assets		3,115,691		3,115,691		3,115,691		3,115,691		3,115,691
Unfunded Actuarial Accrued Liability	\$	625,461	\$	563,411	\$	503,323	\$	445,114	\$	388,701
Funded Ratio		83.3%		84.7%		86.1%		87.5%		88.9%
Actuarially Determined Contribution Amount Normal Cost	<u>t</u>	-		-		-		-		-
UAAL Amortization	\$	173,252	\$	159,616	\$	146,307	\$	133,313	\$	120,620
Provision for Expenses '		52,642		52,642		52,642		52,642		52,642
Actuarially Determined Contribution Amount	\$	225,894	\$	212,258	\$	198,949	\$	185,955	\$	173,262

<sup>1</sup> As requested, set equal to the administrative expenses incurred in the prior year.

# ACCOUNTING

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## PLAN FINANCIAL STATEMENTS UNDER GASB #67

## A. Statement of Fiduciary Net Position under GASB #67 as of June 30, 2017

1.	Assets		
	a. Cash	\$	5
	b. Receivables	¢	
	<ul> <li>Contributions and Miscellaneous Receivables</li> <li>ii. Investments Receivable</li> </ul>	\$	19 477
	iii. Foreign Exchange Contract Receivable		18,477 799,476
	iv. Interest and Dividends		7,521
	v. Due From Other Funds		90
	vi. Total Receivables	\$	825,564
	c. Total Investments	Ť	0,0 * 1
	i. Short-Term Investments	\$	-
	ii. Pooled Repurchase Agreements		205
	iii. Pooled Short-Term Investments		135,038
	iv. Pooled Fixed Income		937,539
	v. Pooled Equity		683,229
	vi. Pooled Alternative Investments		1,148,992
	vii. Pooled Derivatives		(352)
	viii. Pooled Investments at Contract Value		-
	ix. Securities Lending Collateral		31,344
	x. Total Investments	\$	2,935,995
	d. Net Capital Assets		-
	e. Other Assets		-
	f. Total Assets: $(1)(a) + (1)(b)(vi) + (1)(c)(x) + (1)(d) + (1)(e)$	\$	3,761,564
2.	Liabilities		
	a. Administrative Payable	\$	2,953
	b. Retirement Benefits Payable		-
	c. Investments Payable		29,114
	d. Foreign Exchange Contracts Payable		802,337
	e. Securities Lending Obligations		31,344
	f. Securities Sold Under Agreement to Repurchase		30,118
	g. Due To Other Funds		831
	h. Due to Other Governments		-
	i. Total Liabilities: $(2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) + (2)(g) + (2)(h)$	\$	896,697
3.	Fiduciary Net Position Restricted for Pensions: (1)(f) - (2)(i)	\$	2,864,867

#### PLAN FINANCIAL STATEMENTS UNDER GASB #67

#### B. Statement of Changes in Fiduciary Net Position under GASB #67 for the Year Ended June 30, 2017

1.	Fiduciary Net Position as of June 30, 2016	\$ 2,919,061
2.	Additions	
	a. Contributions	
	i. Member Contributions	\$ -
	ii. Employer Contributions	134,800
	iii. Service Purchases (Employer and Member)	-
	iv. Non-Employer Contributing Entity Contributions	 -
	v. Total Contributions	\$ 134,800
	b. Investment Income/(Loss)	
	i. Net Appreciation/(Depreciation) <sup>1,2</sup>	\$ 201,774
	ii. Net Interest and Dividend Income	40,708
	iii. Securities Lending Income	355
	iv. Other Net Investment Income	417
	v. Investment Management Expenses	(20,106)
	vi. Direct Investment Expenses	(1,792)
	vii. Securities Lending Expenses	 (69)
	viii. Total Investment Income/(Loss)	\$ 221,287
	c. Other Additions	
	i. Member Reassignments	\$ -
	ii. Miscellaneous Receipts	-
	iii. Total Other Additions	\$ -
	d. Total Revenue (Additions): $(2)(a)(v) + (2)(b)(viii) + (2)(c)(iii)$	\$ 356,087
3.	Deductions	
	a. Pension and Disability Benefits	\$ 357,639
	b. Death, Survivor, and Funeral Benefits	-
	c. Distributions of Contributions and Interest	-
	d. Member Reassignments	-
	e. Administrative Expenses	52,642
	f. Total Expenses (Deductions): $(3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e)$	\$ 410,281
4.	Net Increase (Decrease) in Fiduciary Net Position: (2)(d) - (3)(f)	\$ (54,194)
5.	Fiduciary Net Position as of June 30, 2017: (1) + (4)	\$ 2,864,867

<sup>1</sup> The calculation of realized gains and losses is independent of the calculation of the net change in the fair value of pension plan investments.

<sup>2</sup> Realized gains and losses on investments that had been held in more than one reporting period and sold in the current period were included as a change in the fair value reported in the prior period(s) and the current period.

## EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

## C. Net Pension Liability under GASB #68 for the Year Ended June 30, 2017

1.	Tot	al Pension Liability			
	a.	Total Pension Liability - Beginning of Year		\$	4,014,773
	b.	Service Cost <sup>1</sup>			712
	c.	Interest Cost <sup>2</sup>			258,975
	d.	Experience (Gains)/Losses			(112,616)
	e.	Assumption Changes			(157)
	f.	Plan Amendments			-
	g.	Benefit Payments			(357,639)
	h.	Member Reasignments <sup>3</sup>			-
	i.	Service Purchases (Employer and Member)			-
	j.	Total Pension Liability - End of Year		\$	3,804,048
2.	Pla	n Fiduciary Net Position			
	a.	Plan Fiduciary Net Position - Beginning of Year		\$	2,919,061
	b.	Employer Contributions			134,800
	c.	Member Contributions			-
	d.	Non-Employer Contributing Entity Contributions			-
	e.	Investment Return			
		i. Expected Investment Return <sup>4</sup>	\$ 189,516		
		ii. Investment Gain/(Loss)	 31,771		_
		iii. Net Investment Return			221,287
	f.	Benefit Payments			(357,639)
	g.	Member Reasignments <sup>3</sup>			-
	h.	Administrative Expenses			(52,642)
	i.	Plan Fiduciary Net Position - End of Year		\$	2,864,867
3.	Ne	t Pension Liability			
3.	a.	Net Pension Liability: (1)(j) - (2)(i)		\$	939,181
	b.	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability : (2)(i) / (1)(j)		Ŷ	75.3%
	ν.				/ 0.0/0

- <sup>2</sup> Includes interest of 6.75% on the beginning-of-year service cost.
- <sup>3</sup> Includes net interfund transfers.
- <sup>4</sup> 6.75%, net of investment expenses and assuming cash flows occur at mid-year.

<sup>&</sup>lt;sup>1</sup> As of the beginning of the year.

#### **EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68**

#### D. Deferred Inflows and Outflows of Resources under GASB #68 for the Year Ended June 30, 2017 1

	Fiscal Year Established	Reason		ining Balance sinning of Year	Remaining Period <sup>2</sup>	Ann	ual Recognition		naining Balance t End of Year
	Liability Experience a. Inflows 2017	Experience Gain	\$	112,616	1.00	\$	112,616	\$	-
	b. Outflows None								
2.	Assumption Changes								
	a. Inflows 2017	Assumption Change Gain		157	1.00	\$	157	\$	-
	b. Outflows None								
3.	Investment Experience	2 <sup>3</sup>							
	a. Inflows								
	2014	Investment Gain	\$	78,871	2.00	\$	39,436	\$	39,435
	2017	Investment Gain	\$	31,771	5.00	\$	6,355	\$	25,416
	b. Outflows								
	2015	Investment Loss	\$	(152,304)	3.00	\$	(50,768)	\$	(101,536)
	2016	Investment Loss	\$	(144,685)	4.00	\$	(36,172)	\$	(108,513)
4.	Total Collective Deferr	ed Inflows / Outflows: $(1) + (2) + (3)$							
	a. Inflows								
		Total	\$	223,415		\$	158,564	\$	64,851
	b. Outflows	Total	¢	(296,989)		\$	(86,940)	\$	(210,049)
		10(a)	\$	(230,303)		Ģ	(00,340)	ą	(210,049)

<sup>1</sup> INPRS determined that the effort and cost to re-create financial statement information for 10 years was not practical. Information was prepared prospectively from June 30, 2013 for GASB #68 purposes.

<sup>2</sup> The initial amortization period for liability experience gains / losses and assumption change gains / losses is equal to the expected future working lifetime of all members, active and inactive. The initial amortization period for investment gains / losses is five years.

<sup>3</sup> Net of investment expenses.

## EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

## D. Deferred Inflows and Outflows of Resources under GASB #68 for the Year Ended June 30, 2017 (Continued) 1

Amounts reported as deferred inflows / (outflows) of resources to be recognized in pension expense:

Year Ending June 30:	
2017	\$ 71,624
2018	\$ (41,150)
2019	\$ (80,585)
2020	\$ (29,814)
2021	\$ 6,351
2022	\$ -
Thereafter	\$ -

# EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

# E. Pension Expense under GASB #68 for the Year Ended June 30, 2017

1. Service Cost

	a.	Total Service Cost <sup>1</sup>	\$ 712
	b.	Member Contributions	-
	c.	Administrative Expenses	 52,642
	d.	Net Employer Service Cost: $(1)(a) + (1)(b) + (1)(c)$	53,354
2.	Inte	rest Cost <sup>2</sup>	258,975
3.	Exp	ected Return on Assets <sup>3</sup>	(189,516)
4.	Plar	Amendments	-
5.	Rec	ognition of Deferred (Inflows) / Outflows of Resources Related to:	
	a.	Liability Experience (Gains) / Losses	(112,616)
	b.	Assumption Change (Gains) / Losses	(157)
	c.	Investment (Gains) / Losses	 41,149
	d.	Total: $(5)(a) + (5)(b) + (5)(c)$	(71,624)
6.	Prel	iminary Pension Expense: (1)(d) + (2) + (3) + (4) + (5)(d)	\$ 51,189
7.	Emj	ployer Service Purchases	-
8.	Tota	l Pension Expense: (6) + (7)	\$ 51,189
2	Inclu	f the beginning of the year. Ides interest of 6.75% on the beginning-of-year service cost. % net of investment expenses and assuming cash flows occur at mid-year.	

<sup>3</sup> 6.75% net of investment expenses and assuming cash flows occur at mid-year.

## NOTES TO THE FINANCIAL STATEMENTS UNDER GASB #67 AND #68

#### F. Selected Notes to the Financial Statements under GASB #67 and #68

- 1. The LEDB Fund is a single-employer plan for GASB accounting purposes.
- 2. Significant actuarial assumptions and other inputs used to measure the total pension liability:

-	Measurement Date	June 30, 2017
-	Valuation Date Assets:	June 30, 2017
	Liabilities:	June 30, 2016 - Member census data as of June 30, 2016 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2016 and June 30, 2017. The valuation results from June 30, 2016 were rolled-forward to June 30, 2017 to reflect benefit accruals during the year less benefits paid.
-	Inflation	2.25%
-	Future Salary Increases	2.25%
-	Cost-of-Living Increases	1.0% compounded annually, beginning January 1, 2020. COLAs have not been granted at January 1, 2017, January 1, 2018 or January 1, 2019, which is reflected in the valuation.
-	Mortality Assumption (Healthy)	RP-2014 (with MP-2014 improvement removed) White Collar mortality tables, with future mortality improvement projected generationally using future mortality improvement inherent in the Social Security Administration's 2014 Trustee report.
-	Mortality Assumption (Disabled)	RP-2014 (with MP-2014 improvement removed) Disability mortality tables, with future mortality improvement projected generationally using future mortality improvement inherent in the Social Security Administration's 2014 Trustee report.
-	Experience Study	The most recent comprehensive experience study was completed in April 2015 and was based on member experience between June 30, 2010 and June 30, 2014. The demographic assumptions were updated as needed for the June 30, 2015 actuarial valuation based on the results of the study.
-	Discount Rate	The discount rate used to measure the total pension liability as of June 30, 2017, is 6.75% and is equal to the long-term expected return on plan investments, net of administrative expenses. The INPRS Board of Trustees has established a funding policy of requesting appropriations from the State in an amount equal to the actuarially determined contribution amount computed by the actuary using the assumptions and methods selected by the Board for the annual actuarial valuations. The assumptions and methods selected by the Board for the annual actuarial valuations. The assumptions and methods selected by the Board for the annual actuarial valuations. The assumptions and methods selected by the Board for the June 30, 2017 actuarial valuation include a 6.75% expected return on assets assumption, a 5-year level dollar closed method for amortizing the unfunded actuarial accrued liability (since the plan is frozen to new entrants and there are very few active member remaining as of June 30, 2017), a 5-year smoothing method for recognizing investment gains and losses in the actuarial value of assets, and a provision for funding back any administrative expenses paid out of plan assets during the prior year.

## NOTES TO THE FINANCIAL STATEMENTS UNDER GASB #67 AND #68

#### F. Selected Notes to the Financial Statements under GASB #67 and #68 (Continued)

- Discount Rate (Continued) Therefore, if the Board continues to follow its current funding policy and the State complies in its contributions to the plan, which has been the case for the past several years, the appropriations will be sufficient to fully fund the plan within 5 years. We note that appropriations are requested on a 2-year budget cycle, such that the amount requested for the second year of each cycle may end up being more or less than the actuarially determined amount for that year, depending on whether the plan experiences gains or losses in the first year of the budget cycle. However, any excess or shortfall in contributions received during the second year of the cycle gets reflected in the actuarially determined contribution calculation for the following 2-year cycle, ensuring that the plan is fully funded within the period required by the Board's funding policy. As a result, a detailed projection of plan assets and cash flows was not prepared to prove that plan assets will be sufficient to pay all future benefit payments for current members.

-	Discount Rate Sensitivity	 1% Decrease (5.75%)	Current Rate (6.75%)	1% Increase (7.75%)		
	Net Pension Liability	\$ 1,217,608	\$ 939,181	\$	695,049	

## 3. Classes of Plan Members Covered: <sup>1</sup>

-	Retired Members, Beneficiaries and Disabled Members Receiving Benefits:	72
-	Terminated Vested Plan Members Entitled to but Not Yet Receiving Benefits:	12
-	Terminated Non-Vested Plan Members Entitled to a Distribution of Contributions:	-
-	Active Plan Members:	11
-	Total Membership:	95

## 4. Money-Weighted Rate of Return:

The money-weighted rate of return equals investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. For the fiscal year ending June 30, 2017, the money-weighted return on the plan assets is 7.9%.

## 5. The components of the Net Pension Liability for the LEDB Fund plan as of June 30, 2017, are as follows:

- Total Pension Liability	\$ 3,804,048
- Plan Fiduciary Net Position	2,864,867
- Net Pension Liability	\$ 939,181

<sup>1</sup> The valuation results as of June 30, 2017 were calculated using June 30, 2016 census data, adjusted for certain activity during fiscal year 2017.

## **REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68**

#### G. Schedule of Changes in the Total Pension Liability and Plan Fiduciary Net Position under GASB #67 and #68 <sup>1</sup>

Year Ending June 30:	 2013		2014		2015		2016		2017	
<ol> <li>Total Pension Liability         <ul> <li>a. Total Pension Liability - Beginning of Year</li> <li>b. Service Cost<sup>2</sup></li> <li>c. Interest Cost <sup>3</sup></li> <li>d. Experience (Gains)/Losses</li> <li>e. Assumption Changes</li> <li>f. Plan Amendments</li> <li>g. Benefit Payments</li> <li>h. Member Reassignments <sup>4</sup></li> <li>i. Service Purchases (Employer and Member)</li> <li>j. Total Pension Liability - End of Year</li> </ul> </li> </ol>	\$ 4,496,986 2,519 291,387 (140,190) - (365,322) - 4,285,380	\$	4,285,380 3,260 277,234 (36,574) - (362,951) - - 4,166,349	\$	4,166,349 3,341 268,981 (67,951) 324,754 - (369,569) - - 4,325,905	\$	4,325,905 1,528 279,980 (233,475) - (359,165) - 4,014,773	\$	4,014,773 712 258,975 (112,616) (157) - (357,639) - - 3,804,048	
<ol> <li>Plan Fiduciary Net Position         <ul> <li>Plan Fiduciary Net Position - Beginning of Year</li> <li>Employer Contributions</li> <li>Member Contributions</li> <li>Non-Employer Contributing Entity Contributions</li> <li>Non-Employer Contributing Entity Contributions</li> <li>Net Investment Return</li> <li>Benefit Payments</li> <li>Member Reassignments <sup>4</sup></li> <li>Administrative Expenses</li> <li>Plan Fiduciary Net Position - End of Year</li> </ul> </li> </ol>	\$ 3,385,805 150,000 - - 200,867 (365,322) - (34,256) 3,337,094	\$	3,337,094 138,300 - - 439,045 (362,951) - (62,488) 3,489,000	\$	3,489,000 130,900 - (3,868) (369,569) - (71,195) 3,175,268	\$	3,175,268 137,600 - 25,996 (359,165) - (60,638) 2,919,061	\$	2,919,061 134,800 - - 221,287 (357,639) - (52,642) 2,864,867	

<sup>1</sup> INPRS determined that the effort and cost to re-create financial statement information for 10 years was not practical. Information was prepared prospectively from June 30, 2012 for GASB #67 purposes and prospectively from June 30, 2013 for GASB #68 purposes.

<sup>2</sup> As of the beginning of the year.

<sup>3</sup> Includes interest of 6.75% on the beginning-of-year service cost.

<sup>4</sup> Includes net interfund transfers.

#### **REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68**

#### H. Schedule of Net Pension Liability and Related Ratios under GASB #67 and #68 1

1.		2.	3.	4. Net Pension Liability (2) - (3)		5. Fiduciary Net Pension as a	6. Actual Covered	7. Net Pension Liability as a	
Year Ending	To	tal Pension Liability	an Fiduciary let Position			Percentage of Total Pension Liability (3) / (2)	Employee Payroll	Percentage of Covered Payroll (4) / (6)	
6/30/2013	\$	4,285,380	\$ 3,337,094	\$	948,286	77.9%	N/A	N/A	
6/30/2014	\$	4,166,349	\$ 3,489,000	\$	677,349	83.7%	N/A	N/A	
6/30/2015	\$	4,325,905	\$ 3,175,268	\$	1,150,637	73.4%	N/A	N/A	
6/30/2016	\$	4,014,773	\$ 2,919,061	\$	1,095,712	72.7%	N/A	N/A	
6/30/2017	\$	3,804,048	\$ 2,864,867	\$	939,181	75.3%	N/A	N/A	

<sup>1</sup> INPRS determined that the effort and cost to re-create financial statement information for 10-years was not practical. Information was prepared prospectively from June 30, 2012 for GASB #67 purposes and prospectively from June 30, 2013 for GASB #68 purposes.

#### **REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68**

# **I. Schedule of Contributions under GASB #67 and #68**<sup>1</sup>

1.		2.		3.		4.	5. Actual	6.		
	Ad	ctuarially		Actual		ontribution	Covered	Contributions as a		
Year	De	termined	Employer		Exces	ss / (Deficiency)	Employee	Percentage of		
Ending	Cor	tribution <sup>2</sup>	Cor	ntributions <sup>3</sup>	(Deficiency)		Payroll	Covered Payroll		
						(3) - (2)		(3) / (5)		
6/30/2013	\$	140,202	\$	150,000	\$	9,798	N/A	N/A		
6/30/2014	\$	138,250	\$	138,300	\$	50	N/A	N/A		
6/30/2015	\$	118,927	\$	130,900	\$	11,973	N/A	N/A		
6/30/2016	\$	137,599	\$	137,600	\$	1	N/A	N/A		
6/30/2017	\$	169,734	\$	134,800	\$	(34,934)	N/A	N/A		

<sup>1</sup> INPRS determined that the effort and cost to re-create financial statement information for 10 years was not practical. Information was prepared prospectively from June 30, 2012 for GASB #67 purposes and prospectively from June 30, 2013 for GASB #68 purposes.

<sup>2</sup> The actuarially determined contribution amounts are developed in the acturial valuation completed one year prior to the beginning of the fiscal year.

<sup>3</sup> Excludes employer service purchases.

# **REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68**

# J. Schedule of Money-Weighted Returns under GASB #67 and #68<sup>1</sup>

1.	2.
Year Ending	Money-Weighted Rate of Return
6/30/2013	6.2%
6/30/2014	13.7%
6/30/2015	(0.1%)
6/30/2016	0.8%
6/30/2017	7.9%

<sup>&</sup>lt;sup>1</sup> INPRS determined that the effort and cost to re-create financial statement information for 10 years was not practical. Information was prepared prospectively from June 30, 2012 for GASB #67 purposes and prospectively from June 30, 2013 for GASB #68 purposes.

# **CENSUS DATA**

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

	Actives	Inactive Vested	Disabled	Retired	Beneficiary	Total
Total as of June 30, 2015	11	12	-	59	15	97
Data Adjustments for Activity During Fiscal Year 2016						
Adjusted Total as of June 30, 2015	11	12	-	59	15	97
New Entrants	-	-	-	-	-	-
Rehires	-	-	-	-	-	-
Non-Vested Terminations	-	-	-	-	-	-
Vested Terminations	-	-	-	-	-	-
Retirements	-	-	-	-	-	-
Disablements	-	-	-	-	-	-
Death with Beneficiary	-	-	-	(1)	1	-
Death without Beneficiary	-	-	-	(1)	(1)	(2)
Refunds	-	-	-	-	-	-
Data Adjustments						
Total as of June 30, 2016	11	12	-	57	15	95
Data Adjustments for Activity During Fiscal Year 2017						
Adjusted Total as of June 30, 2016	11	12	-	57	15	95

<sup>1</sup> The valuation results as of June 30, 2017 were calculated using June 30, 2016 census data, adjusted for certain activity during fiscal year 2017.

# **B.** Census Information as of June 30, 2016<sup>1</sup>

		Male	Female	 Total
1.	Active			
	a. Number	7	4	11
	b. Average Age	70.6	76.8	72.8
	c. Average Years of Service <sup>2</sup>	7.5	7.4	7.5
2.	Inactive			
	a. Number	11	1	12
	b Average Age	67.4	86.0	68.9
	c. Average Years of Service <sup>2</sup>	7.1	9.0	7.3
3.	Retiree/Beneficiary/Disabled			
	a. Number	52	20	72
	b. Average Age	76.5	77.8	76.8
	c. Annual Benefits Payable <sup>3</sup>	288,410	68,454	\$ 356,864

<sup>1</sup> The valuation results as of June 30, 2017 were calculated using June 30, 2016 census data, adjusted for certain activity during fiscal year 2017.

<sup>2</sup> Average based on creditable service earned before November 8, 1989.

<sup>&</sup>lt;sup>3</sup> Figures shown reflect cost-of-living increases effective January 1 following the date of the census data, if provided.

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

1. Valuation Date	2. Active Members
6/30/2008	34
6/30/2009	33
6/30/2010	20
6/30/2011	7
6/30/2012	6
6/30/2013	24
6/30/2014	24
6/30/2015	17
6/30/2016	11
6/30/2017	11

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

<sup>&</sup>lt;sup>2</sup> The valuation results beginning as of June 30, 2014 were calculated using census data as of the prior year end, adjusted for certain activity during the current fiscal year.

1.	2.	3.	4.	5.	6.	7.	8.	9.
	А	dded	Re	moved	End	l of Year <sup>3</sup>		
		Annual		Annual		Annual	% Increase in	Average
Valuation		Allowances		Allowance	5	Allowances	Annual	Annual
Date	Number	(\$ in Thousands)	4 Number	( <u>\$ in Thousan</u>	ls) <sup>4</sup> Number	(\$ in Thousands) <sup>4</sup>	Allowances <sup>4</sup>	Allowances <sup>4</sup>
6/30/2008	1	\$ -	2	\$ 1	0 44	\$ 274	(3.4%)	\$ 6,223
6/30/2009	17	88	2		2 59	371	35.3%	6,281
6/30/2010	5	9	3	2	7 61	347	(6.5%)	5,685
6/30/2011	4	22	-		- 65	356	2.6%	5,477
6/30/2012	2	13	4	2	0 63	349	(2.0%)	5,536
6/30/2013	9	41	4	2	6 68	364	4.3%	5,362
6/30/2014	-	-	-		- 68	364	0.0%	5,362
6/30/2015	1	2	1		1 68	366	0.5%	5,377
6/30/2016	8	23	2	1	4 74	364	(0.5%)	4,919
6/30/2017	-	-	2		7 72	357	(1.9%)	4,956

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

 $^{\scriptscriptstyle 1}$  Valuation results prior to June 30, 2010 were calculated by the prior actuary.

<sup>2</sup> The valuation results beginning as of June 30, 2014 were calculated using census data as of the prior year end, adjusted for certain activity during the current fiscal year.

<sup>4</sup> Annual allowances reflect cost-of-living increases effective January 1 following the date of the census data, if provided.

<sup>3</sup> End of year annual allowances may not equal to the prior end of year annual allowances plus additions and less removals because of reductions for beneficiary benefits, data changes, and costof-living increases.

### E. Distribution of Active Members by Age and Service <sup>1,2</sup>

Attained		Distribution of Active Members by Age and Service as of June 30, 2016										
Age	Under 10 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												
25-29												
30-34												
35-39												
40-44												
45-49												
50-54												
55-59	1								1			
60-64												
65-69	3								3			
70&Above	5	1	1						7			
Total	9	1	1						11			

<sup>1</sup> The valuation results as of June 30, 2017 were calculated using June 30, 2016 census data, adjusted for certain activity during fiscal year 2017. <sup>2</sup> Creditable service as of November 8, 1989.

# F. Distribution of Inactive Vested Members by Age and Service <sup>1,2</sup>

Attained	Distribution of Inactive Vested Members by Age and Service as of June 30, 2016Under 10 years10 to 14 years15 to 19 years20 to 24 years25 to 29 yearsOver 30 yearsTotal											
Age	Under 10 years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	Total						
<25												
25-29												
30-34												
35-39												
40-44												
45-49												
50-54												
55-59	3						3					
60-64	1	1					2					
65-69		1	1				2					
70&Above	4		1				5					
Total	8	2	2				12					

<sup>1</sup> The valuation results as of June 30, 2017 were calculated using June 30, 2016 census data, adjusted for certain activity during fiscal year 2017.

<sup>2</sup> Creditable service as of November 8, 1989.

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

Attained	Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired as of June 30, 2016											
Age	Under 10 Years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	Total						
<40												
40-44												
45-49												
50-54												
55-59												
60-64	3					3						
65-69	6	1				7						
70-74	12	5	2			19						
75-79	7	3	2	4		16						
80-84	5	3	5	2		15						
85-89	2	3	3	2		10						
90&Above			1		1	2						
Total	35	15	13	8	1	72						

<sup>&</sup>lt;sup>1</sup> The valuation results as of June 30, 2017 were calculated using June 30, 2016 census data, adjusted for certain activity during fiscal year 2017.

# H. Schedule of Benefit Recipients by Type of Benefit Option<sup>1</sup>

Nu	Number of Benefit Recipients by Benefit Option as of June 30, 2016							
Amount of Monthly Benefit	Retiree Single Life Annuity	Retiree 50% Joint and Survivor Annuity	Survivors	Disability	Total			
bellent	Life Annuny	Annulty	Survivors	Disability	Total			
\$1-500	2	31	12	-	45			
501 - 1,000	2	21	3	-	26			
1,001 - 1,500	-	1	-	-	1			
1,501 - 2,000	-	-	-	-	-			
2,001 - 3,000	-	-	-	-	-			
over 3,000	-	-	-	-	-			
Total	4	53	15	-	72			

### I. Schedule of Average Benefit Payments as of June 30, 2016<sup>1,2</sup>

	_			Year	s of (	Credited Se	ervic	e		
		0-10	10-14	15-19		20-24		25-29	30+	Total
Average Monthly Defined Benefit	\$	247	\$ 451	\$ 667	\$	1,008	\$	577	\$ 784	\$ 413
Average Final Average Salary Number of Benefit Recipients	\$	25,847 37	\$ 22,383 16	\$ 24,244 15		N/A 2		N/A 1	N/A 1	\$ 24,709 72

<sup>&</sup>lt;sup>1</sup> The valuation results as of June 30, 2017 were calculated using June 30, 2016 census data, adjusted for certain activity during fiscal year 2017. Distributions are based on monthly benefit amounts at July 1, 2016. No cost-of-living increases were provided on January 1, 2017, January 1, 2018, or January 1, 2019.

<sup>&</sup>lt;sup>2</sup> For some members average salary at retirement was not available. The average salary for each group excluded these members.

### ACTUARIAL ASSUMPTIONS AND METHODS

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#### A. Actuarial Assumptions

The assumptions used in the valuation were selected and approved by the INPRS Board of Trustees. Given the size of the Plan's population, a separate study was not completed on this Plan's specific experience. 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

Funding: Accounting:	6.75% (net of administrative and investment expenses) 6.75% (net of investment expenses)								
Accounting:	6.75% (net of investment expenses)								
Future Salary Increases	2.25% per year								
Inflation	2.25% per year								
Cost of Living Increases	1.0% per year in retirement beginning January 1, 2020. COLAs have not been granted at January 1, 2017, January 1, 2018 or January 1, 2019, which is reflected in the liability valuation at June 30, 2017.								
Mortality (Healthy)	RP-2014 (with MP-2014 improvement removed) White Collar mortality tables, with future mortality improvement projected generationally using future mortality improvement inherent in the Social Security Administration's 2014 Trustee report.								
Mortality (Disabled)	RP-2014 (with MP-2014 improvement removed) Disability mortality tables, with future mortality improvement projected generationally using future mortality improvement inherent in the Social Security Administration's 2014 Trustee report.	2							
Disability	75% of 1964 OASDI Tables. Illustrative rates shown below:								
	Age Rate								
	20 0.045%								
	25 0.064%								
	30 0.083%								
	35 0.111%								
	40 0.165%								
	45 0.270%								
	50 0.454%								
	55 0.757%								
	60 1.220%								

0.000%

65+

# A. Actuarial Assumptions (Continued)

Termination	Sarason T-2 Tables. Illustrative rates shown below:	
	Age	Rate
	20	5.4384%
	25	5.2917%
	30	5.0672%
	35	4.6984%
	40	3.5035%
	45	1.7686%
	50	0.4048%
	55+	0.0000%
Retirement	Based on historical experience of plan members. Rates shown below:	
	Age	Rate
	55	10%
	56-57	8%
	58-61	2%
	62-64	5%
	65+	100%
Decrement Timing	Decrements	s are assumed to occur at the beginning of the year.
Spouse/Beneficiary	-	nbers are assumed to be married or to have a dependent beneficiary. Males are assumed to be ars older than females.
Administrative Expense	-	nt basis. Administrative expenses incurred during the year prior to the valuation date are the calculation of funds to be appropriated to the LEDB Fund by the State.

# A. Actuarial Assumptions (Continued)

Data Assumptions	Spouse gender is assumed to be the opposite gender of the member.
Changes in Assumptions	For disabled members, the mortality assumption is updated from the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables to the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables.

#### **B. Assumptions Rationale**

Investment Return	The investment return assumption is based on analysis completed by the INPRS investment advisor and an independent, high- level analysis completed by PwC using a "building block" approach that considered the target asset allocation from the Board's investment policy and capital market forecasts from various investment professionals.
Other Assumptions	The Board of Trustees adopts actuarial assumptions, each of which individually represents a reasonable long-term estimate of anticipated experience under the System. Given the size of the Plan's population, a separate study was not completed on this Plan's specific experience. The economic and demographic assumptions listed previously in the report were reviewed and updated, where appropriate, based on the historical experience observed during the study and expectations for the future.

#### C. 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 five years. However, the smoothing method 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

#### Funding: The actuarial cost method is Traditional Unit Credit.

The normal cost is calculated separately for each active member and is equal to actuarial present value of additional benefits expected to be accrued during the year following the valuation date. The actuarial accrued liability on any valuation date is the actuarial present value of the benefits earned for service prior to the valuation date. Since the benefits for all members of the Legislator's Defined Benefit Plan are fixed and no longer increasing with future service credit or future salary increases, applying the Traditional Unit Credit cost method results in the Actuarial Accrued Liability being equal to the Present Value of Future Benefits (i.e. all benefits are treated as though they are attributable to past service) and the Normal Cost being equal to \$0. This is consistent with the actual status of member benefit accruals.

Gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 5-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 5-year period. However, when the plan is at or above 100% funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payments each year. 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.

#### Accounting: 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 and assumption changes are amortized into expense over the average expected future service of all plan participants (active and inactive). Gains and losses occurring from investment experience different than assumed are amortized into expense over a 5-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Member census data as of June 30, 2016 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2016 and June 30, 2017. The valuation results from June 30, 2016 were rolled-forward to June 30, 2017 to reflect benefit accruals during the year less benefits paid.

# C. Actuarial Methods (Continued)

### 2. Asset Valuation Method

The Actuarial Value of Assets smoothes the recognition of gains and losses on the Market Value of Assets over five years, subject to a 20% corridor.

# 3. <u>State Appropriations</u>

Based on the assumptions and methods previously described, an actuarially determined contribution amount is computed. The Board considers this information when requesting funds from the State.

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

There were no method changes for the June 30, 2017 valuation.

### SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions

<u>Page</u>

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#### **Summary of Plan Provisions**

The benefit provisions for LEDB are set forth in IC 2-3.5-4. Below is a summary of the plan provisions that are pertinent to the valuation herein and may exclude certain provision that are not deemed relevant to our calculations. This summary is based on our understanding of the plan provisions set forth in the applicable statutes of the State of Indiana. If there is a discrepancy between the summary below and the applicable statutes, the applicable statutes shall govern.

Pa	rticipation	All members of the Indiana General Assembly who (1) were serving on April 30, 1989, and (2) filed an election to participate in this plan under IC 2-3.5-3-1(b).		
Eli	Eligibility for Defined Pension Benefits			
a.	Normal Retirement	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 55 with 10 or more years of creditable service		
c.	Late Retirement	Subject to continued employment after normal retirement		
d.	Disability Retirement	5 or more years of creditable service and qualified for Social Security disability benefits		
e.	Termination	10 or more years of creditable service and no longer active (i.e. vested inactive)		
f.	Pre-Retirement Death	10 or more years of creditable service		

# Summary of Plan Provisions (Continued)

### Amount of Benefits

a.	Normal Retirement	The normal retirement benefit is a monthly annuity payable for life with a 50% continuation to a surviving spouse or surviving children and is equal to the lesser of (1) \$40 times years of creditable service in the General Assembly completed before November 8, 1989, or (2) 100% of average monthly earnings <sup>1</sup> .
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 participant 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 60 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.
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 as of the normal retirement date. The participant may elect to receive a reduced early retirement benefit.

1 Average monthly earnings is the monthly average of earnings, including business per diem and subsistence allowances, attributable to service as a legislator during the 3 years that produce the highest such average.

# Summary of Plan Provisions (Continued)

# Amount of Benefits (continued)

f. Death	The spouse or dependent beneficiary is entitled to receive 50% of the monthly life annuity the participant was receiving or was entitled to receive under the assumption that the participant retired on the later of age 55 or the day before the date of death.		
Cost-of-Living Adjustments	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 as of January 1, 2017.		
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 One-Half Survivor Benefits	Member will be paid a monthly benefit for life. After death, one-half (1/2) of the benefit will be paid to the spouse for their lifetime or the dependent until age 18 unless disabled.		
Withdrawal from Fund	If a member's employment is terminated prior to eligibility for a retirement annuity, the member may withdraw their contributions from the Fund.		
Changes in Provisions	It is our understanding that there were no changes to the Plan that impacted the pension benefits during the fiscal year.		

# **DEFINITIONS OF TECHNICAL TERMS**

Definitions of Technical Terms

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# **Definitions of Technical Terms**

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, 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 mathematical procedure for allocating the Present Value of Future Benefits to service periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.
Actuarial Gain/(Loss)	The difference between actual Unfunded Actuarial Accrued Liability and anticipated Unfunded Actuarial Accrued Liability resulting from differences between actual and expected plan experience between two valuation dates.
Actuarial Present Value	The single amount that is equal to a payment or series of payments in the future. It is determined by discounting future payments using predetermined Actuarial Assumptions for interest and by probabilities of payment.
Actuarial Valuation	The determination, as of an Actuarial Valuation Date, of the Present Value of Future Benefits, Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values.
Actuarial Valuation Date	The date as of which an Actuarial Valuation is performed.
Actuarially Determined Contribution	The precise actuarial contribution rate (expressed as a percentage of covered payroll) or amount determined in accordance with a Funding Policy, which generally reflects the Normal Cost and amortization of any Unfunded Actuarial Accrued Liability.
Actuarially Equivalent	Having the same Actuarial Present Value, based on a set of Actuarial Assumptions.

# **Definitions of Technical Terms (Continued)**

Amortization	The payment of a present value financial obligation on an installment basis over a future period.
Creditable Service	Service credited under the system that was rendered before the date of the actuarial valuation.
Funding Policy	A set of principles, often including a prescribed Actuarial Cost Method, Actuarial Assumptions, and/or Unfunded Actuarial Accrued Liability Amortization Method, that guide the calculation of the Actuarially Determined Contribution and management decisions regarding funding.
Level Dollar Amortization	Amortization where the installments are equal dollar amounts during each period.
Level Percent Amortization	Amortization where the installments are an equal percent of employee payroll during each period.
Normal Cost (NC)	That portion of the Present Value of Future Benefits which is allocated to the year following the Actuarial Valuation Date 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.
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.

# **Definitions of Technical Terms (Continued)**

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.
Unfunded Actuarial Accrued Liability (UAAL)	The difference between the Actuarial Accrued Liability and Plan Assets as of a particular date. Plan assets may be market value or a smoothed value.
Unfunded Actuarial Accrued Liability Amortization Method	A predetermined process by which any Unfunded Actuarial Accrued Liability will be amortized for calculating the Actuarially Determined Contribution.