



nyhart
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INTERIM GASB 74/75 ACTUARIAL VALUATION

Fiscal Year Ending June 30, 2020

STATE OF INDIANA

Revised December 21, 2020

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December 21, 2020

**Andy Blough, FSA, EA, MAAA
Indiana Public Retirement System
One North Capital, Suite 001
Indianapolis, IN 46204**

This report summarizes the GASB actuarial valuation for the State of Indiana 2019/20 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 74 (Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans) and GASB Statement No. 75 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions).

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.

Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.



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SECTION A – EXECUTIVE SUMMARY



Executive Summary

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Detailed Actuary's Notes

The following assumption changes have been made since last year's full valuation, which was for the fiscal year ending June 30, 2019:

1. For State Personnel
 - a. The mortality, termination, retirement rate, and payroll growth assumptions have been updated based on the revised tables presented in the INPRS 2020 Experience Study. The mortality, retirement rate, and payroll growth updates led to slight decreases in liabilities, while the termination update led to an increase in liabilities.
 - b. The health care coverage election rate has been updated from 40% to 35% for employees that are eligible for a normal, unreduced or disability pension under PERF and from 15% to 10% for employees with health coverage that are not eligible for a normal, unreduced or disability pension under PERF. More information on this change can be found in Appendix A. The change led to a reduction in liabilities.
 - c. The spousal coverage election rate has been updated from 70% for male employees and 55% for female employees to 20% for male employees and 15% for female employees. More information on the change can be found in Appendix B. This change led to a slight decrease in liabilities.
2. For the Legislature
 - a. The mortality and payroll growth assumptions have been updated based on the revised tables presented in the INPRS 2020 Experience Study. The mortality update led to a decrease in liabilities, while the payroll growth update led to a slight increase in liabilities.
 - b. The health care coverage election rate has been updated from 40% to 35% for employees that are eligible for a normal, unreduced or disability pension under PERF and from 15% to 10% for employees with health coverage that are not eligible for a normal, unreduced or disability pension under PERF. More information on this change can be found in Appendix A. The change led to a slight reduction in liabilities.
 - c. The spousal coverage election rate has been updated from 100% for all employees to 95% for male employees and 50% for female employees. More information on the change can be found in Appendix B. This change led to a slight decrease in liabilities.
3. For Indiana State Police (ISP):
 - a. The disability assumption has been updated to follow the table presented for the Conservation and Excise Police in the INPRS 2020 Experience Study. This change led to a slight decrease in liabilities.
 - b. The mortality assumption has been updated to follow the table presented for the '77 Fund in the INPRS 2020 Experience Study. This change led to decrease in liabilities.
 - c. The payroll growth assumption has been updated to follow the table used in the July 1, 2020 pension valuation for the Indiana State Police. This change led to a decrease in liabilities.



Executive Summary

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Detailed Actuary's Notes - Continued

4. For Conservation and Excise Police (CEP):
 - a. The mortality, retirement rate, disability, and payroll growth assumptions have been updated based on the revised tables presented in the INPRS 2020 Experience Study. The retirement and disability updates led to an increase in liabilities, while the mortality and payroll growth updates led to a decrease in liabilities.
 - b. The spousal coverage election rate has been updated from 85% for male employees and 25% for female employees to 85% for male employees and 15% for female employees. More information on the change can be found in Appendix B. This change led to a slight decrease in liabilities.

For the funded groups (State Personnel, ISP and CEP), we have updated the discount rate assumption to be based on a blended rate using the expected rate of return on assets (3.25% for State Personnel and 6.20% for ISP and CEP) for years when investments are expected to be sufficient to pay the projected benefit payments and the yield 20-year tax-exempt general obligation municipal bonds (2.66% as of June 30, 2020) for years when investments are insufficient to cover future benefit payments. The following accounting discount rates were used for this year's valuation:

- State Personnel: 3.23% as of June 30, 2020 and 3.26% as of July 1, 2019
- ISP: 6.20% as of June 30, 2020 and 6.20% as of July 1, 2019
- CEP: 6.20% as of June 30, 2020 and 3.36% as of July 1, 2019

Refer to the Discussion of Discount Rates section for more information on selection of the discount rate. Making this change resulted in a slight increase in liabilities for State Personnel and a significant decrease in liabilities for CEP.

For the Legislature, which is unfunded, we have updated the discount rate assumption based on the yield for 20-year tax-exempt general obligation municipal bonds as of June 30, 2020 (measurement date). The discount rate is 2.66% as of June 30, 2020 and 3.51% as of July 1, 2019. Refer to the Discussion of Discount Rates section for more information on selection of the discount rate. Making this change resulted in an increase in liabilities.



Executive Summary

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Summary of Results

Presented below is the summary of GASB 74/75 results (for all employee groups) for the fiscal year ending June 30, 2020.

<i>As of June 30, 2020</i>	<i>State Personnel</i>		<i>Legislature</i>		<i>Indiana State Police (ISP)</i>		<i>Conservation and Excise Police (CEP)</i>		<i>Total</i>
Total OPEB Liability	\$	52,311,259	\$	8,110,150	\$	177,447,852	\$	49,274,689	\$ 287,143,950
Actuarial Value of Assets		(47,137,471)		0		(158,657,034)		(27,172,098)	(232,966,603)
Net OPEB Liability	\$	5,173,788	\$	8,110,150	\$	18,790,818	\$	22,102,591	\$ 54,177,347
Funded Ratio		90.1%		0.0%		89.4%		55.1%	81.1%

<i>For FY 2019/20</i>	<i>State Personnel</i>		<i>Legislature</i>		<i>ISP</i>		<i>CEP</i>		<i>Total</i>
OPEB Expense	\$	3,570,090	\$	(184,122)	\$	(22,512,663)	\$	1,573,366	\$ (17,553,329)
Annual Employer Contribution	\$	5,030,562	\$	493,765	\$	21,727,429	\$	4,166,567	\$ 31,418,323

<i>As of June 30, 2020</i>	<i>State Personnel</i>		<i>Legislature</i>		<i>ISP</i>		<i>CEP</i>	
Discount Rate		3.23%		2.66%		6.20%		6.20%
Expected Return on Assets		3.25%		N/A		6.20%		6.20%

SECTION B – STATE PERSONNEL



GASB Disclosures (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2019/20	FY 2018/19	FY 2017/18
Total OPEB Liability			
Total OPEB liability – beginning of year	\$ 57,423,651	\$ 47,525,294	\$ 53,040,129
Service cost	2,961,092	1,932,796	2,113,477
Interest	1,891,706	1,851,245	1,909,791
Changes of benefit terms	0	0	0
Changes in assumptions	(6,835,400)	2,802,670	(1,163,973)
Differences between expected and actual experience	1,622,200	6,587,365	(5,331,960)
Benefit payments	(4,751,990)	(3,275,719)	(3,042,170)
Net change in total OPEB liability	\$ (5,112,392)	\$ 9,898,357	\$ (5,514,835)
Total OPEB liability – end of year	\$ 52,311,259	\$ 57,423,651	\$ 47,525,294
Plan Fiduciary Net Position			
Plan fiduciary net position – beginning of year	\$ 46,203,020	\$ 45,489,242	\$ 44,998,027
Contributions – employer	5,030,562	3,336,598	3,384,366
Contributions – active employees	0	0	0
Net investment income	789,133	1,006,887	546,743
Benefit payments	(4,751,990)	(3,275,719)	(3,042,170)
Trust administrative expenses	(133,254)	(353,988)	(397,724)
Net change in plan fiduciary net position	\$ 934,451	\$ 713,778	\$ 491,215
Plan fiduciary net position – end of year	\$ 47,137,471	\$ 46,203,020	\$ 45,489,242
Net OPEB Liability – end of year	\$ 5,173,788	\$ 11,220,631	\$ 2,036,052
Plan fiduciary net position as % of total OPEB liability	90.1%	80.5%	95.7%
Covered employee payroll ¹	\$ 1,503,767,928	\$ 1,470,677,680	\$ 1,262,054,123
Net OPEB liability as % of covered payroll	0.3%	0.8%	0.7%

¹ FY 2019/20 covered payroll is based on covered payroll for FY 2018/19 increased by the payroll growth inflation assumption (2.25%).



GASB Disclosures (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below prior to FY 2016/17 are based on the Annual Required Contribution (ARC) calculated in prior GASB 45 actuarial valuations as shown in the Plan Sponsor financial statements.

	<i>FY 2019/20</i>	<i>FY 2018/19</i>	<i>FY 2017/18</i>	<i>FY 2016/17</i>	<i>FY 2015/16</i>
Actuarially Determined Contribution (ADC)	\$ 4,751,990 ²	\$ 3,275,719	\$ 3,042,170	\$ 3,060,429	\$ 1,537,527
Contributions in relation to the ADC ³	5,030,562	3,336,598	3,384,366	4,801,561	2,977,166
Contribution deficiency / (excess)	\$ (278,572)	\$ (60,879)	\$ (342,196)	\$ (1,741,132)	\$ (1,439,639)

Covered employee payroll	\$ 1,503,767,928	\$ 1,470,677,680	\$ 1,262,054,123	\$ 1,234,282,761	\$ 1,148,771,000
Contribution as a % of covered employee payroll	0.3%	0.2%	0.3%	0.4%	0.3%

	<i>FY 2014/15</i>	<i>FY 2013/14</i>	<i>FY 2012/13</i>	<i>FY 2011/12</i>	<i>FY 2010/11</i>
Actuarially Determined Contribution (ADC)	\$ 1,838,675	\$ 1,009,935	\$ 940,502	\$ 2,964,232	\$ 4,664,253
Contributions in relation to the ADC ⁴	3,567,257	3,200,158	4,202,964	33,849,768	16,922,179
Contribution deficiency / (excess)	\$ (1,728,582)	\$ (2,190,223)	\$ (3,262,462)	\$ (30,885,536)	\$ (12,257,926)

Covered employee payroll	\$ 1,180,296,000	\$ 1,219,424,000	\$ 1,208,402,000	\$ 1,166,823,000	\$ N/A
Contribution as a % of covered employee payroll	0.3%	0.3%	0.3%	2.9%	N/A

² Refer to the Actuarially Determined Contributions section for the calculation details.

³ Includes employer contribution for pay-go cost and (any) pre-funding contributions deposited into the OPEB Trust.



GASB Disclosures (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

OPEB Expense

<i>OPEB Expense</i>	<i>FY 2019/20</i>	<i>FY 2018/19</i>
Discount rate as of beginning of fiscal year	3.26%	3.87%
Discount rate as of end of fiscal year	3.22%	3.26%
Service cost	\$ 2,961,092	\$ 1,932,796
Interest	1,891,706	1,851,245
Changes of benefit terms	0	0
Projected earnings on OPEB plan investments	(1,503,941)	(1,473,675)
Reduction for contributions from active employees	0	0
OPEB plan administrative expenses	133,254	353,988
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ 411,086	\$ 179,343
Changes in assumptions	(742,387)	234,099
Net difference between projected and actual earnings on OPEB plan investments	419,280	276,318
Total current period recognition	\$ 87,979	\$ 689,760
Total OPEB expense	\$ 3,570,090	\$ 3,354,114



GASB Disclosures (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Difference between projected and actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average future service to retirement while the difference between projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

<i>Differences between expected and actual experience for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ (5,331,960)	7	\$ (761,709)	\$ (3,046,833)
June 30, 2019	\$ 6,587,365	7	\$ 941,052	\$ 4,705,261
June 30, 2020	\$ 1,622,200	7	\$ 231,743	\$ 1,390,457

<i>Changes in assumptions for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ (1,163,973)	7	\$ (166,282)	\$ (665,127)
June 30, 2019	\$ 2,802,670	7	\$ 400,381	\$ 2,001,908
June 30, 2020	\$ (6,835,400)	7	\$ (976,486)	\$ (5,858,914)

<i>Net difference between projected and actual earnings in OPEB plan investments for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ 914,798	5	\$ 182,960	\$ 365,918
June 30, 2019	\$ 466,788	5	\$ 93,358	\$ 280,072
June 30, 2020	\$ 714,808	5	\$ 142,962	\$ 571,846



GASB Disclosures (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Deferred Outflows / (Inflows) of Resources – Continued

<i>As of fiscal year ending June 30, 2020</i>	<i>Deferred Outflows</i>	<i>Deferred Inflows</i>
Differences between expected and actual experience	\$ 6,095,718	\$ (3,046,833)
Changes in assumptions	2,001,908	(6,524,041)
Net difference between projected and actual earnings in OPEB plan investments	1,217,836	0
Total	\$ 9,315,462	\$ (9,570,874)

Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2020 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

<i>FYE</i>	<i>Balance</i>
2021	\$ 87,979
2022	\$ 87,977
2023	\$ (94,983)
2024	\$ (188,337)
2025	\$ 596,694
Thereafter	\$ (744,742)



GASB Disclosures (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2020, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 3.23%.
- The 1% decrease in discount rate would be 2.23%.
- The 1% increase in discount rate would be 4.23%.

<i>As of June 30, 2020</i>	<i>Net OPEB Liability</i>	
1% Decrease	\$	9,584,281
Current Discount Rate	\$	5,173,788
1% Increase	\$	1,128,226

The following presents the net OPEB liability as of June 30, 2020, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 7.5% decreasing by 0.5% annually to an ultimate rate of 4.5%.
- The 1% decrease in health care trend rates would assume an initial rate of 6.5% decreasing by 0.5% annually to an ultimate rate of 3.5%.
- The 1% increase in health care trend rates would assume an initial rate of 8.5% decreasing by 0.5% annually to an ultimate rate of 5.5%.

<i>As of June 30, 2020</i>	<i>Net OPEB Liability</i>	
1% Decrease	\$	(625,430)
Current Health Care Trend Rates	\$	5,173,788
1% Increase	\$	12,107,487



Asset Information (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Asset Information

<i>Asset Breakdown</i>	<i>FY 2018/19</i>	<i>FY 2019/20</i>
Assets		
Cash and cash equivalents	\$ 200,471	\$ 208,759
Securities lending cash collateral	0	0
Total cash	\$ 200,471	\$ 208,759
Receivables		
Contributions	\$ 171,696	\$ 656,429
Accrued interest	93,283	112,664
Total receivables	\$ 264,979	\$ 769,093
Investments		
Debt Securities	\$ 45,865,288	\$ 46,493,498
Equities	0	0
Mutual Funds	0	0
Other	0	0
Total investments	\$ 45,865,288	\$ 46,493,498
Total assets	\$ 46,330,738	\$ 47,471,350
Liabilities		
Payables		
Investment management fees	\$ 0	\$ 0
Benefits	127,718	333,879
Total liabilities	\$ 127,718	\$ 333,879
Net position restricted to OPEB	\$ 46,203,020	\$ 47,137,471



Asset Information (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Asset Information

<i>Asset Reconciliation</i>	<i>FY 2018/19</i>	<i>FY 2019/20</i>
Additions		
Contributions received		
Employer	\$ 3,336,598	\$ 5,030,562
Employee	0	0
Total contributions	\$ 3,336,598	\$ 5,030,562
Investment income		
Net increase in fair value of investments	\$ 1,006,887	\$ 789,133
Interests and dividends	0	0
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 1,006,887	\$ 789,133
Total additions	\$ 4,343,485	\$ 5,819,695
Deductions		
Benefit payments (net of retiree contributions)	\$ (3,275,719)	\$ (4,751,990)
Administrative expenses	(353,988)	(133,254)
Other	0	0
Total deductions	\$ (3,629,707)	\$ (4,885,244)
Net increase in net position	\$ 713,778	\$ 934,451
Net position restricted to OPEB		
Beginning of year	45,489,242	46,203,020
End of year	\$ 46,203,020	\$ 47,137,471



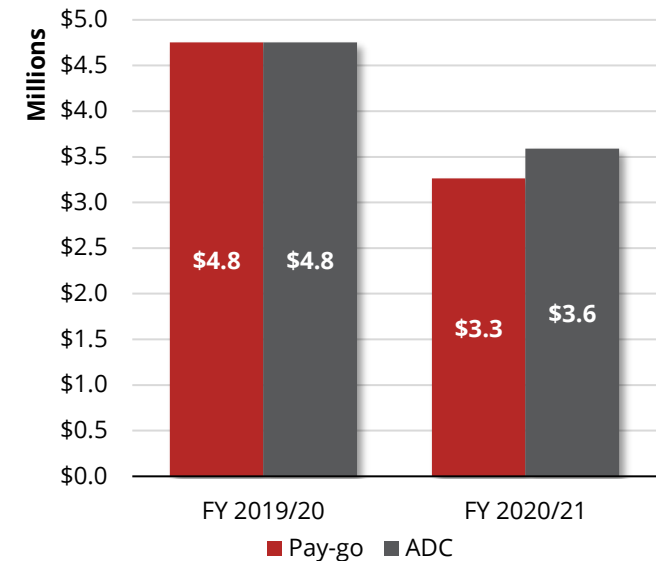
Actuarially Determined Contributions (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the Plan Sponsor has the ability to contribute these amounts on an annual basis. The Plan Sponsor has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

	FY 2019/20	FY 2020/21
Discount rate	3.25%	3.25%
Payroll growth factor used for amortization	N/A	N/A
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level Dollar	Level Dollar
Amortization period	27 years	26 years
Actuarial accrued liability (AAL) – beginning of year	\$ 57,470,613	\$ 52,226,758
Actuarial value of assets – beginning of year	(46,203,020)	(47,137,471)
Unfunded AAL – beginning of year	\$ 11,267,593	\$ 5,089,287
Normal Cost	\$ 2,967,044	\$ 3,193,095
Amortization of UAAL	613,261	283,718
Total normal cost plus amortization	\$ 3,580,305	\$ 3,476,813
Interest to the end of year	116,360	112,996
Actuarially Determined Contribution – Preliminary	\$ 3,696,665	\$ 3,589,809
Expected benefit payments ⁴	4,751,990	3,263,811
Actuarially Determined Contribution – Final⁵	\$ 4,751,990	\$ 3,589,809

Cash vs Accrual Accounting



Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

⁴ Actual for FY 2019/20

⁵ Set to be the greater of the preliminary ADC and expected benefit payments.



Discussion of Discount Rates (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale) must be used.

For the current valuation:

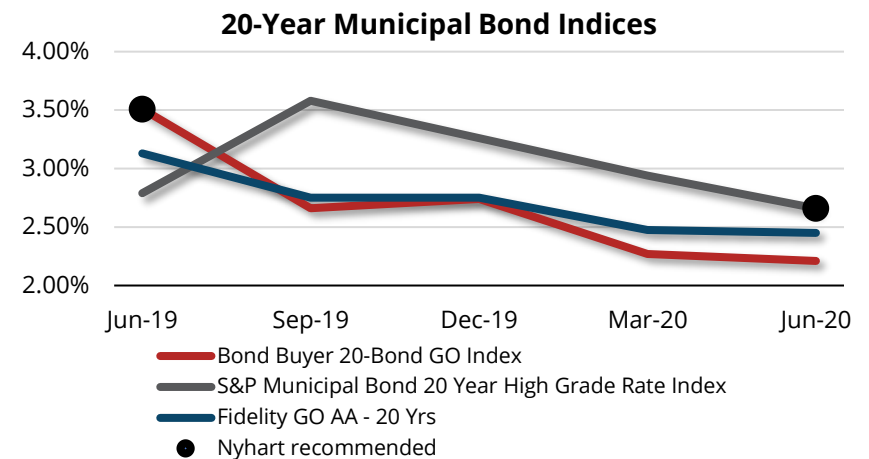
1. The long-term expected rate of return on OPEB plan investment is 3.25%. This was determined using a building block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These expected future real rates of return are then combined to produce the long-term expected rate of return by weighting them based on the target asset allocation percentage and adding in expected inflation (2.25%). The best estimates of arithmetic real rates of return for each major asset class included in the OPEB Plan's target asset allocation as of June 30, 2020 are summarized in the following table.

Asset Class	Target Allocation	L/T Expected Real ROR (JP Morgan)
U.S. Bond	100.00%	1.00%

2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments are selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

Yield as of	July 1, 2019	June 30, 2020
Bond Buyer Go 20-Bond Municipal Bond Index	3.51%	2.21%
S&P Municipal Bond 20-Year High Grade Rate Index	2.79%	2.66%
Fidelity 20-Year Go Municipal Bond Index	3.13%	2.45%
Bond Index Range	2.79% - 3.51%	2.21% - 2.66%
Actual Discount Rate Used	3.51%	2.66%

3. The final equivalent single discount rate used for this year's valuation is 3.26% as of July 1, 2019 and 3.23% as of June 30, 2020 with the expectation that the State will continue to contribute at least the Actuarially Determined Contribution each year.





Summary of Key Actuarial Assumptions (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

For a complete summary of actuarial methods and assumptions, refer to the GASB 74/75 actuarial valuation report for the fiscal year ending June 30, 2019.

Measurement Date

For fiscal year ending June 30, 2020, a June 30, 2020 measurement date was used.

Actuarial Valuation Date

July 1, 2019 with results actuarially projected on a “no gain / no loss” basis to get to the June 30, 2020 measurement date. Liabilities as of July 1, 2019 are based on an actuarial valuation date of July 1, 2019.

Discount Rate

3.26% as of July 1, 2019 and 3.23% as of June 30, 2020 for accounting disclosure purposes
Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

Payroll Growth

2.75% for general wage inflation (includes 2.25% inflation and 0.50% real wage growth) plus the following merit and productivity increases which are based on the assumptions approved from the Indiana Public Retirement System (INPRS) 2020 Experience Study.

YOS	General	Judges	Prosecuting Attorneys
0	6.00%	0.00%	0.00%
5	2.00%	0.00%	0.00%
10	0.75%	0.00%	0.00%
13+	0.00%	0.00%	0.00%

Inflation Rate

2.25% per year

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant’s benefit at retirement; and
- Annual Service Cost is a constant percentage of the participant’s salary that is assumed to increase according to the Payroll Growth.



Summary of Key Actuarial Assumptions (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Health Care Trend Rates

FYE	Medical/Rx	FYE	Medical/Rx
2021	7.5%	2025	5.5%
2022	7.0%	2026	5.0%
2023	6.5%	2027+	4.5%
2024	6.0%		

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Mortality

Healthy Judges and PARF employees and retirees: SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2019 with a 1 year setback for males and a 1 year setback for females
 All other healthy employees and retirees: SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2019 with a 3 year set forward for males and a 1 year set forward for females
 Disabled retirees: SOA Pub-2010 General Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2019 with a 140% load
 Surviving Spouses: SOA Pub-2010 Continuing Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2019 with no set forward for males and a 2 year set forward for females

Withdrawal Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health care coverage.

Annual withdrawal rates for judges follow the PERF, PARF, and Judges' Retirement System rates from the Indiana Public Retirement System (INPRS) 2020 Experience Study. Sample rates are as shown below:

State Personnel >=\$20k earnings		State Personnel < \$20k earnings			Judges	
YOS	Unisex	Age	Male	Female	Age	Rates
0	18.00%	20	34.00%	40.00%	All ages	3%
5	8.00%	30	29.00%	27.00%		
10	6.50%	40	24.00%	17.00%		
15	5.25%	50	17.00%	12.00%		
20	4.00%	60	17.00%	12.00%		
25+	3.00%	61+	14.00%	12.00%		
					Attorney	
					Age	Rates
					All ages	10%



Summary of Key Actuarial Assumptions (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Retirement Rate

Annual retirement rates follow the PERF, PARF, and Judges' Retirement System rates are based on the Indiana Public Retirement System (INPRS) 2020 Experience Study. Sample rates are as shown below:

State Personnel

Age	< 10 YOS	10 YOS	15 YOS	25 YOS	27 YOS	29 YOS	30+ YOS
50	0%	0%	4%	4%	4%	4%	4%
55	0%	0%	5%	5%	5%	5%	14%
60	0%	0%	12%	12%	12%	12%	12%
62	0%	0%	22%	22%	22%	22%	22%
65	0%	30%	30%	30%	30%	30%	30%
67+	0%	100%	100%	100%	100%	100%	100%

Judges

Age	< 8 YOS	8 - 22 YOS	22+ YOS
55 - 61	0%	0%	20%
62	0%	8%	20%
63	0%	8%	20%
64	0%	8%	20%
65	0%	30%	30%
66 - 74	0%	30%	30%
75+	0%	100%	100%

Attorneys

Age	< 10 YOS	10 - 22 YOS	22+ YOS
55 - 61	0%	0%	40%
62	0%	20%	40%
63	0%	20%	40%
64	0%	20%	40%
65 - 69	0%	50%	50%
70+	0%	100%	100%

Spousal Coverage

20% of male and 15% of female employees are assumed to be married upon retirement. Husbands are assumed to be three years older than wives.

Spousal coverage for current retirees is based on actual data.



Summary of Key Actuarial Assumptions (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Health Care Coverage Election Rate

Active Employees

Actives with Current Health Coverage

10% of employees are assumed to elect coverage at retirement. Once the employees have met the PERF eligibility for normal, unreduced or a disability pension, the election rate increases to 35% due to the presence of the Senate Enrolled Act 501 account balance.

PERF eligibility requirement is the earlier of:

- a. Age 55 with 85 points
- b. Age 60 with 15 years of service
- c. Age 65 with 10 years of service

Actives without Current Health Coverage

35% of employees are assumed to elect coverage at retirement after meeting the PERF retirement eligibility.

Inactive Employees

Based on actual data



Actuary's Notes (STATE PERSONNEL)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Interim year valuation results have been projected from the prior year's valuation with adjustments for actual medical/Rx claims and enrollment experience for the 24 months ending May 2020 (with 60% weight on the most recent 12 months) and premium rate changes from 2020 to 2021. Making this change resulted in a slight increase in liabilities.

Additionally, we have updated the discount rate assumption to be based on the yield for 20-year tax-exempt general obligation municipal bonds as of June 30, 2020 (measurement date). The discount rate is 3.23% as of June 30, 2020 and 3.26% as of July 1, 2019. Refer to the Discussion of Discount Rates section for more information on selection of the discount rate. Making this change resulted in a slight increase in liabilities.

Premium Rates

The 2020 and 2021 monthly retiree premium rates by plan for non-tobacco users are as shown below:

Plans	Eff. 1/1/2020		Eff. 1/1/2021	
	Single	Family	Single	Family
CDHP 1	\$ 542.36	\$ 1,636.05	\$ 542.36	\$ 1,636.05
CDHP 2	\$ 598.74	\$ 1,795.65	\$ 598.74	\$ 1,795.65
CDHP Wellness	\$ 511.16	\$ 1,542.45	\$ 511.16	\$ 1,542.45
Traditional PPO	\$ 778.14	\$ 2,334.50	\$ 778.14	\$ 2,334.50

SECTION C – LEGISLATURE



GASB Disclosures (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2019/20	FY 2018/19	FY 2017/18
Total OPEB Liability			
Total OPEB liability – beginning of year	\$ 8,090,224	\$ 9,994,526	\$ 11,987,469
Service cost	43,131	113,767	120,023
Interest	276,890	380,946	420,082
Changes of benefit terms	0	(1,062,888)	0
Changes in assumptions	463,515	335,132	(385,363)
Differences between expected and actual experience	(269,845)	(1,136,744)	(1,527,405)
Benefit payments	(493,765)	(534,515)	(620,280)
Net change in total OPEB liability	\$ 19,926	\$ (1,904,302)	\$ (1,992,943)
Total OPEB liability – end of year	\$ 8,110,150	\$ 8,090,224	\$ 9,994,526
Plan Fiduciary Net Position			
Plan fiduciary net position – beginning of year	\$ 0	\$ 0	\$ 0
Contributions – employer	493,765	534,515	620,280
Contributions – active employees	0	0	0
Net investment income	0	0	0
Benefit payments	(493,765)	(534,515)	(620,280)
Trust administrative expenses	0	0	0
Net change in plan fiduciary net position	\$ 0	\$ 0	\$ 0
Plan fiduciary net position – end of year	\$ 0	\$ 0	\$ 0
Net OPEB Liability – end of year	\$ 8,110,150	\$ 8,090,224	\$ 9,994,526
Plan fiduciary net position as % of total OPEB liability	0.0%	0.0%	0.0%
Covered employee payroll	\$ N/A	\$ N/A	\$ N/A
Net OPEB liability as % of covered payroll	N/A	N/A	N/A



GASB Disclosures (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

OPEB Expense

<i>OPEB Expense</i>	<i>FY 2019/20</i>	<i>FY 2018/19</i>
Discount rate as of beginning of fiscal year	3.51%	3.87%
Discount rate as of end of fiscal year	2.66%	3.51%
Service cost	\$ 43,131	\$ 113,767
Interest	276,890	380,946
Changes of benefit terms	0	(1,062,888)
Projected earnings on OPEB plan investments	0	0
Reduction for contributions from active employees	0	0
OPEB plan administrative expenses	0	0
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (586,799)	\$ (532,830)
Changes in assumptions	82,656	(10,047)
Net difference between projected and actual earnings on OPEB plan investments	0	0
Total current period recognition	\$ (504,143)	\$ (542,877)
Total OPEB expense	\$ (184,122)	\$ (1,111,052)



GASB Disclosures (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Difference between projected and actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average future service to retirement while the difference between projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

<i>Differences between expected and actual experience for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ (1,527,405)	5	\$ (305,481)	\$ (610,962)
June 30, 2019	\$ (1,136,744)	5	\$ (227,349)	\$ (682,046)
June 30, 2020	\$ (269,845)	5	\$ (53,969)	\$ (215,876)

<i>Changes in assumptions for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ (385,363)	5	\$ (77,073)	\$ (154,144)
June 30, 2019	\$ 335,132	5	\$ 67,026	\$ 201,080
June 30, 2020	\$ 463,515	5	\$ 92,703	\$ 370,812

<i>Net difference between projected and actual earnings in OPEB plan investments for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ 0	5	\$ 0	\$ 0
June 30, 2019	\$ 0	5	\$ 0	\$ 0
June 30, 2020	\$ 0	5	\$ 0	\$ 0



GASB Disclosures (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Deferred Outflows / (Inflows) of Resources – Continued

<i>As of fiscal year ending June 30, 2020</i>	<i>Deferred Outflows</i>	<i>Deferred Inflows</i>
Differences between expected and actual experience	\$ 0	\$ (1,508,884)
Changes in assumptions	571,892	(154,144)
Net difference between projected and actual earnings in OPEB plan investments	N/A	N/A
Total	\$ 571,892	\$ (1,663,028)

Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2020 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

<i>FYE</i>	<i>Balance</i>
2021	\$ (504,143)
2022	\$ (504,141)
2023	\$ (121,586)
2024	\$ 38,734
2025	\$ 0
Thereafter	\$ 0



GASB Disclosures (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2020, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 2.66%.
- The 1% decrease in discount rate would be 1.66%.
- The 1% increase in discount rate would be 3.66%.

<i>As of June 30, 2020</i>	<i>Net OPEB Liability</i>
1% Decrease	\$ 9,207,233
Current Discount Rate	\$ 8,110,150
1% Increase	\$ 7,218,957

The following presents the net OPEB liability as of June 30, 2020, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 7.5% decreasing by 0.5% annually to an ultimate rate of 4.5%.
- The 1% decrease in health care trend rates would assume an initial rate of 6.5% decreasing by 0.5% annually to an ultimate rate of 3.5%.
- The 1% increase in health care trend rates would assume an initial rate of 8.5% decreasing by 0.5% annually to an ultimate rate of 5.5%.

<i>As of June 30, 2020</i>	<i>Net OPEB Liability</i>
1% Decrease	\$ 7,183,383
Current Health Care Trend Rates	\$ 8,110,150
1% Increase	\$ 9,229,588



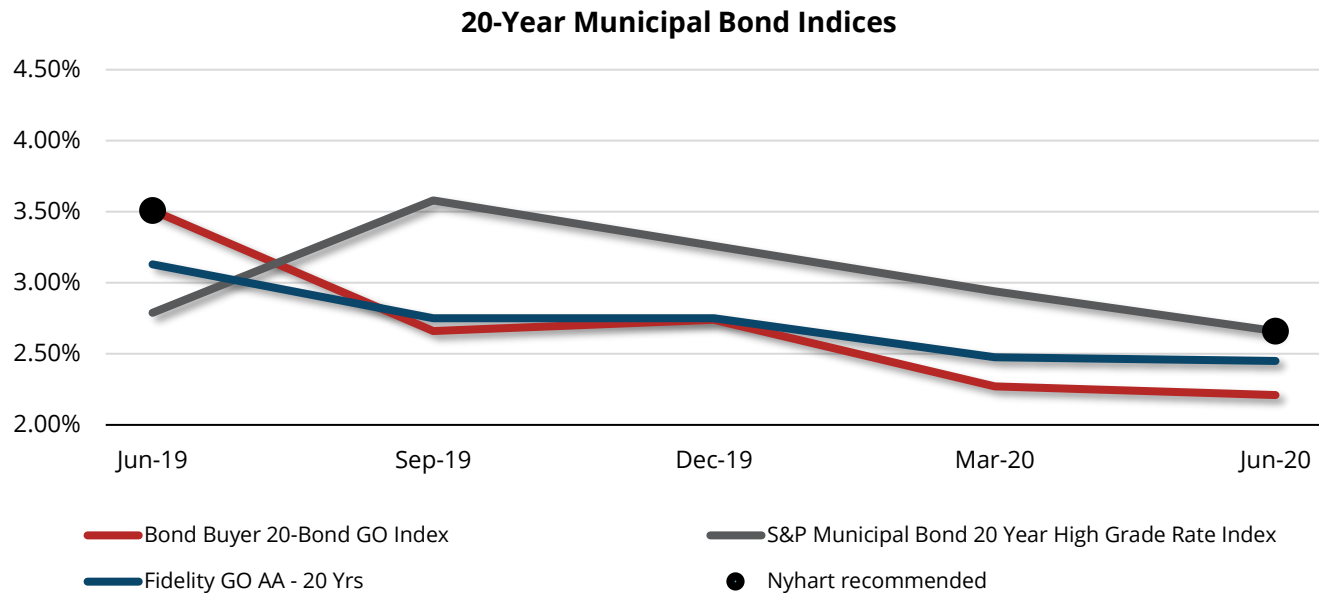
Discussion of Discount Rates (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Under GASB 75, the discount rate used in valuing OPEB liabilities for unfunded plans as of the Measurement Date must be based on a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale).

For the current valuation, the discount rate was selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

	Bond Buyer Go 20-Bond Municipal Bond Index	S&P Municipal Bond 20-Year High Grade Rate Index	Fidelity 20-Year Go Municipal Bond Index	Nyhart Range	Actual Discount Rate Used
Yield as of July 1, 2019	3.51%	2.79%	3.13%	2.79% - 3.51%	3.51%
Yield as of June 30, 2020	2.21%	2.66%	2.45%	2.21% - 2.66%	2.66%





Summary of Key Actuarial Assumptions (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

For a complete summary of actuarial methods and assumptions, refer to the GASB 74/75 actuarial valuation report for the fiscal year ending June 30, 2019.

Measurement Date

For fiscal year ending June 30, 2020, a June 30, 2020 measurement date was used.

Actuarial Valuation Date

July 1, 2019 with results actuarially projected on a “no gain / no loss” basis to get to the June 30, 2020 measurement date. Liabilities as of July 1, 2019 are based on an actuarial valuation date of July 1, 2019.

Discount Rate

3.51% as of July 1, 2019 and 2.66% as of June 30, 2020 for accounting disclosure purposes
Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

Payroll Growth

2.25% for general wage inflation plus 0.50% for merit and productivity increases.

Inflation Rate

2.25% per year

Health Care Trend Rates

FYE	Medical/Rx	FYE	Medical/Rx
2021	7.5%	2025	5.5%
2022	7.0%	2026	5.0%
2023	6.5%	2027+	4.5%
2024	6.0%		

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Dental and vision costs for those enrolled in the ISP plan are assumed to increase by 3.0% in the future.

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant’s benefit at retirement; and
- Annual Service Cost is a constant percentage of the participant’s salary that is assumed to increase according to the Payroll Growth.



Summary of Key Actuarial Assumptions (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Mortality

Healthy employees and retirees: SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2019 with a 1 year setback for males and a 1 year setback for females
Disabled retirees: SOA Pub-2010 General Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2019 with a 140% load
Surviving Spouses: SOA Pub-2010 Continuing Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2019 with no set forward for males and a 2 year set forward for females

Health Care Coverage Election Rate

Active Employees

Actives with Current Health Coverage

10% of employees are assumed to elect coverage at retirement. Once the employees have met the PERF eligibility for normal, unreduced or a disability pension, the election rate increases to 35% due to the presence of the Senate Enrolled Act 501 account balance.

PERF eligibility requirement is the earlier of:

- a. Age 55 with 85 points
- b. Age 60 with 15 years of service
- c. Age 65 with 10 years of service

Actives without Current Health Coverage

35% of employees are assumed to elect coverage at retirement after meeting the PERF retirement eligibility.

Inactive Employees

Based on actual data

Spousal Coverage

95% of male and 50% of female employees are assumed to be married upon retirement. Husbands are assumed to be three years older than wives.

Spousal coverage for current retirees is based on actual data.



Actuary's Notes (LEGISLATURE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Interim year valuation results have been projected from the prior year's valuation with adjustments for actual medical/Rx claims and enrollment experience for the 24 months ending May 2020 (with 60% weight on the most recent 12 months) and premium rate changes from 2020 to 2021. Making this change resulted in a decrease in liabilities.

Additionally, we have updated the discount rate assumption based on the yield for 20-year tax-exempt general obligation municipal bonds as of June 30, 2020 (measurement date). The discount rate is 2.66% as of June 30, 2020 and 3.51% as of July 1, 2019. Refer to the Discussion of Discount Rates section for more information on selection of the discount rate. Making this change resulted in an increase in liabilities.

Premium Rates

The 2020 and 2021 monthly premium rates by plan for non-tobacco users are as shown below:

Plans	Eff. 1/1/2020		Eff. 1/1/2021	
	Single	Family	Single	Family
CDHP 1	\$ 542.36	\$ 1,636.05	\$ 542.36	\$ 1,636.05
CDHP 2	\$ 598.74	\$ 1,795.65	\$ 598.74	\$ 1,795.65
CDHP Wellness	\$ 511.16	\$ 1,542.45	\$ 511.16	\$ 1,542.45
Traditional PPO	\$ 778.14	\$ 2,334.50	\$ 778.14	\$ 2,334.50

SECTION D – INDIANA STATE POLICE



GASB Disclosures (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2019/20	FY 2018/19	FY 2017/18
Total OPEB Liability			
Total OPEB liability – beginning of year	\$ 198,445,243	\$ 324,517,099	\$ 539,736,386
Service cost	5,032,384	8,531,267	17,810,791
Interest	12,530,058	12,777,709	19,725,281
Changes of benefit terms	0	3,253,798	(196,573,638)
Changes in assumptions	(15,686,765)	(66,154,178)	(27,946,460)
Differences between expected and actual experience	(20,071,092)	(78,675,348)	(21,241,592)
Benefit payments	(2,801,976)	(5,805,104)	(6,993,669)
Net change in total OPEB liability	\$ (20,997,391)	\$ (126,071,856)	\$ (215,219,287)
Total OPEB liability – end of year	\$ 177,447,852	\$ 198,445,243	\$ 324,517,099
Plan Fiduciary Net Position			
Plan fiduciary net position – beginning of year	\$ 137,969,003	\$ 117,362,956	\$ 97,322,900
Contributions – employer	21,727,429	23,936,818	25,813,525
Contributions – active employees	845,660	857,420	404,060
Net investment income	1,276,385	2,108,792	1,422,502
Benefit payments	(2,801,976)	(5,805,104)	(6,993,669)
Trust administrative expenses	(359,467)	(491,879)	(606,362)
Net change in plan fiduciary net position	\$ 20,688,031	\$ 20,606,047	\$ 20,040,056
Plan fiduciary net position – end of year	\$ 158,657,034	\$ 137,969,003	\$ 117,362,956
Net OPEB Liability – end of year	\$ 18,790,818	\$ 60,476,240	\$ 207,154,143
Plan fiduciary net position as % of total OPEB liability	89.4%	69.5%	36.2%
Covered employee payroll ⁶	\$ 113,431,389	\$ 110,664,770	\$ 98,338,193
Net OPEB liability as % of covered payroll	16.6%	54.6%	210.7%

⁶ FY 2019/20 covered payroll is based on payroll for FY 2018/19 increased by the payroll growth assumption (2.50%).



GASB Disclosures (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below prior to FY 2016/17 are based on the Annual Required Contribution (ARC) calculated in prior GASB 45 actuarial valuations as shown in the Plan Sponsor financial statements.

	FY 2019/20		FY 2018/19		FY 2017/18		FY 2016/17		FY 2015/16	
Actuarially Determined Contribution (ADC)	\$	9,116,153 ⁷	\$	18,356,134	\$	35,041,558	\$	34,980,369	\$	30,629,812
Contributions in relation to the ADC ⁸		21,727,429		23,936,818		25,813,525		26,871,267		34,862,363
Contribution deficiency / (excess)	\$	(12,611,276)	\$	(5,580,684)	\$	9,228,033	\$	8,109,102	\$	(4,232,551)
Covered employee payroll	\$	113,431,389	\$	110,664,770	\$	98,338,193	\$	96,174,272	\$	91,753,000
Contribution as a % of covered employee payroll		19.2%		21.6%		26.2%		27.9%		38.0%

	FY 2014/15		FY 2013/14		FY 2012/13		FY 2011/12		FY 2010/11	
Actuarially Determined Contribution (ADC)	\$	29,604,071	\$	26,029,514	\$	27,418,949	\$	27,793,932	\$	30,154,522
Contributions in relation to the ADC ⁴		25,319,778		24,834,550		11,683,966		18,626,963		13,786,787
Contribution deficiency / (excess)	\$	4,284,293	\$	1,194,964	\$	15,734,983	\$	9,166,969	\$	16,367,735
Covered employee payroll	\$	92,130,000	\$	93,630,000	\$	87,040,000	\$	87,040,000	\$	N/A
Contribution as a % of covered employee payroll		27.5%		26.5%		13.4%		21.4%		N/A

⁷ Refer to the Actuarially Determined Contributions section for the calculation details.

⁸ Includes employer contribution for pay-go cost and (any) pre-funding contributions deposited into the OPEB Trust.



GASB Disclosures (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

OPEB Expense

<i>OPEB Expense</i>	<i>FY 2019/20</i>	<i>FY 2018/19</i>
Discount rate as of beginning of fiscal year	6.20%	3.87%
Discount rate as of end of fiscal year	6.20%	6.20%
Service cost	\$ 5,032,384	\$ 8,531,267
Interest	12,530,058	12,777,709
Changes of benefit terms	0	3,253,798
Projected earnings on OPEB plan investments	(9,146,790)	(4,112,473)
Reduction for contributions from active employees	(845,660)	(857,420)
OPEB plan administrative expenses	359,467	491,879
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (17,141,147)	\$ (14,273,848)
Changes in assumptions	(15,683,914)	(13,442,948)
Net difference between projected and actual earnings on OPEB plan investments	2,382,939	808,858
Total current period recognition	\$ (30,442,122)	\$ (26,907,938)
Total OPEB expense	\$ (22,512,663)	\$ (6,823,178)



GASB Disclosures (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Difference between projected and actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average future service to retirement while the difference between projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

<i>Differences between expected and actual experience for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ (21,241,592)	7	\$ (3,034,513)	\$ (12,138,053)
June 30, 2019	\$ (78,675,348)	7	\$ (11,239,335)	\$ (56,196,678)
June 30, 2020	\$ (20,071,092)	7	\$ (2,867,299)	\$ (17,203,793)

<i>Changes in assumptions for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ (27,946,460)	7	\$ (3,992,351)	\$ (15,969,407)
June 30, 2019	\$ (66,154,178)	7	\$ (9,450,597)	\$ (47,252,984)
June 30, 2020	\$ (15,686,765)	7	\$ (2,240,966)	\$ (13,445,799)

<i>Net difference between projected and actual earnings in OPEB plan investments for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ 2,040,609	5	\$ 408,122	\$ 816,243
June 30, 2019	\$ 2,003,681	5	\$ 400,736	\$ 1,202,209
June 30, 2020	\$ 7,870,405	5	\$ 1,574,081	\$ 6,296,324



GASB Disclosures (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Deferred Outflows / (Inflows) of Resources – Continued

<i>As of fiscal year ending June 30, 2020</i>	<i>Deferred Outflows</i>	<i>Deferred Inflows</i>
Differences between expected and actual experience	\$ 0	\$ (85,538,524)
Changes in assumptions	0	(76,668,190)
Net difference between projected and actual earnings in OPEB plan investments	8,314,776	0
Total	\$ 8,314,776	\$ (162,206,714)

Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2020 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

<i>FYE</i>	<i>Balance</i>
2021	\$ (30,442,122)
2022	\$ (30,442,123)
2023	\$ (30,850,243)
2024	\$ (31,250,984)
2025	\$ (25,798,199)
Thereafter	\$ (5,108,267)



GASB Disclosures (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2020, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 6.20%.
- The 1% decrease in discount rate would be 5.20%.
- The 1% increase in discount rate would be 7.20%.

<i>As of June 30, 2020</i>	<i>Net OPEB Liability</i>	
1% Decrease	\$	38,455,717
Current Discount Rate	\$	18,790,818
1% Increase	\$	1,819,183

The following presents the net OPEB liability as of June 30, 2020, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 7.5% decreasing by 0.5% annually to an ultimate rate of 4.5%.
- The 1% decrease in health care trend rates would assume an initial rate of 6.5% decreasing by 0.5% annually to an ultimate rate of 3.5%.
- The 1% increase in health care trend rates would assume an initial rate of 8.5% decreasing by 0.5% annually to an ultimate rate of 5.5%.

<i>As of June 30, 2020</i>	<i>Net OPEB Liability</i>	
1% Decrease	\$	(1,029,460)
Current Health Care Trend Rates	\$	18,790,818
1% Increase	\$	42,369,088



Asset Information (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Asset Information

<i>Asset Breakdown</i>	<i>FY 2018/19</i>	<i>FY 2019/20</i>
Assets		
Cash and cash equivalents	\$ 35,888,888	\$ 4,685,467
Securities lending cash collateral	0	0
Total cash	\$ 35,888,888	\$ 4,685,467
Receivables		
Contributions	\$ 0	\$ 0
Accrued interest	739,216	14,605
Total receivables	\$ 739,216	\$ 14,605
Investments		
Debt Securities	\$ 101,923,391	\$ 154,476,767
Equities	0	0
Mutual Funds	0	0
Other	0	0
Total investments	\$ 101,923,391	\$ 154,476,767
Total assets	\$ 138,551,495	\$ 159,176,839
Liabilities		
Payables		
Investment management fees	\$ 0	\$ 0
Benefits	582,492	519,805
Total liabilities	\$ 582,492	\$ 519,805
Net position restricted to OPEB	\$ 137,969,003	\$ 158,657,034



Asset Information (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Asset Information

<i>Asset Reconciliation</i>	<i>FY 2018/19</i>	<i>FY 2019/20</i>
Additions		
Contributions received		
Employer	\$ 23,936,818	\$ 21,727,429
Active Employees	857,420	845,660
Total contributions	\$ 24,794,238	\$ 22,573,089
Investment income		
Net increase in fair value of investments	\$ 2,108,792	\$ 1,276,385
Interests and dividends	0	0
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 2,108,792	\$ 1,276,385
Total additions	\$ 26,903,030	\$ 23,849,474
Deductions		
Benefit payments (net of retiree contributions)	\$ (5,805,104)	\$ (2,801,976)
Administrative expenses	(491,879)	(359,467)
Other	0	0
Total deductions	\$ (6,296,983)	\$ (3,161,443)
Net increase in net position	\$ 20,606,047	\$ 20,688,031
Net position restricted to OPEB		
Beginning of year	117,362,956	137,969,003
End of year	\$ 137,969,003	\$ 158,657,034

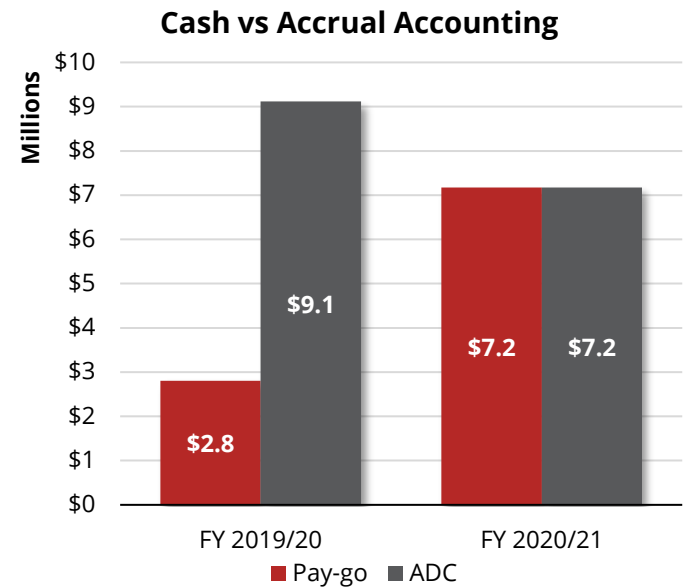


Actuarially Determined Contributions (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the Plan Sponsor has the ability to contribute these amounts on an annual basis. The Plan Sponsor has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

	FY 2019/20	FY 2020/21
Discount rate	6.20%	6.20%
Payroll growth factor used for amortization	N/A	N/A
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level Dollar	Level Dollar
Amortization period	27 years	26 years
Actuarial accrued liability (AAL) – beginning of year	\$ 198,445,243	\$ 177,447,852
Actuarial value of assets – beginning of year	(137,969,003)	(158,657,034)
Unfunded AAL – beginning of year	\$ 60,476,240	\$ 18,790,818
Normal Cost ⁹	\$ 4,186,724	\$ 4,090,490
Amortization of UAAL	4,397,224	1,387,393
Total normal cost plus amortization	\$ 8,583,948	\$ 5,477,883
Interest to the end of year	532,205	339,629
Actuarially Determined Contribution – Preliminary	\$ 9,116,153	\$ 5,817,512
Expected benefit payments ¹⁰	2,801,976	7,173,297
Actuarially Determined Contribution – Final¹¹	\$ 9,116,153	\$ 7,173,297



Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

⁹ Reduced for active employee contributions, which were \$845,660 for FY 2019/20 and assumed to be \$866,802 for FY 2020/21 (based on FY 2020/21 contribution increased by total payroll growth assumption of 2.5%).

¹⁰ Actual for FY 2019/20

¹¹ Set to be the greater of the preliminary ADC and expected benefit payments.



Discussion of Discount Rates (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale) must be used.

For the current valuation:

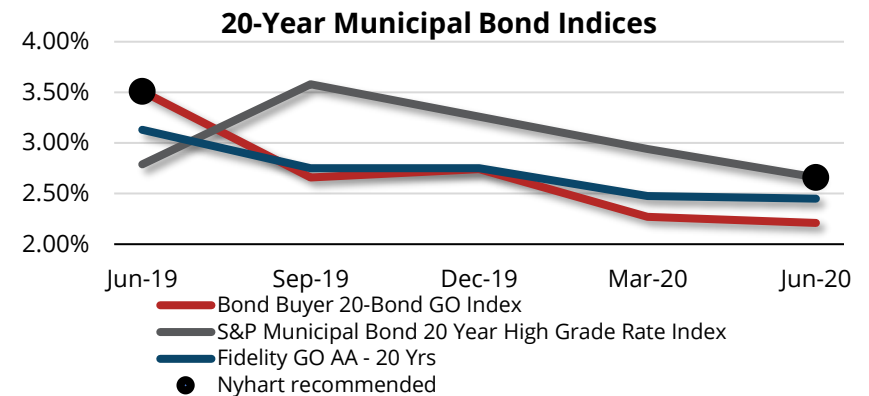
1. The long-term expected rate of return on OPEB plan investment is 6.20%. The expected future real rates of return as shown in the State of Indiana 2019 CAFR for the ISP Pension Plan are shown below. Inflation is expected to be 2.25%. The best estimates of arithmetic real rates of return for each major asset class included in the OPEB Plan's target asset allocation as of June 30, 2020 are summarized in the following table.

Asset Class	Target Allocation	L/T Expected Real ROR
Broad US Equity	29%	6.9%
Global ex-US Equity	13%	7.1%
Domestic Fixed	17%	3.0%
High Yield	5%	4.8%
Short Duration	4%	2.6%
Cash Equivalents	2%	2.3%
Hedge Funds	25%	5.1%
Real Estate	5%	5.8%

2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments are selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

Yield as of	July 1, 2019	June 30, 2020
Bond Buyer Go 20-Bond Municipal Bond Index	3.51%	2.21%
S&P Municipal Bond 20-Year High Grade Rate Index	2.79%	2.66%
Fidelity 20-Year Go Municipal Bond Index	3.13%	2.45%
Bond Index Range	2.79% - 3.51%	2.21% - 2.66%
Actual Discount Rate Used	3.51%	2.66%

3. The final equivalent single discount rate used for this year's valuation is 6.20% as of July 1, 2019 and 6.20% as of June 30, 2020 based on the expectation that the ISP will continue to make contributions equal to the benefit payments each year plus additional prefunding contributions of \$17.9 million per year (based on actual pre-funding contributions over the past five years) until the trust is sufficient to pay all future benefits.





Summary of Key Actuarial Assumptions (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

For a complete summary of actuarial methods and assumptions, refer to the GASB 74/75 actuarial valuation report for the fiscal year ending June 30, 2019.

Measurement Date

For fiscal year ending June 30, 2020, a June 30, 2020 measurement date was used.

Actuarial Valuation Date

July 1, 2019 with results actuarially projected on a “no gain / no loss” basis to get to the June 30, 2020 measurement date. Liabilities as of July 1, 2019 are based on an actuarial valuation date of July 1, 2019.

Discount Rate

6.20% as of July 1, 2019 and 6.20% as of June 30, 2020 for accounting disclosure purposes
Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

Payroll Growth

Payroll growth rates are based on the tables used in the Indiana State Police actuarial pension valuation as of July 1, 2020.

Age	Pre-1987 Plan	1987 Plan
26	3.50%	9.00%
31	3.50%	6.50%
36+	3.50%	4.00%

Inflation Rate

2.25% per year

Health Care Trend Rates

FYE	Medical/Rx	FYE	Medical/Rx
2021	7.5%	2025	5.5%
2022	7.0%	2026	5.0%
2023	6.5%	2027+	4.5%
2024	6.0%		

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Dental and vision costs are assumed to increase by 3.0% in the future.



Summary of Key Actuarial Assumptions (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant’s benefit at retirement; and
- Annual Service Cost is a constant percentage of the participant’s salary that is assumed to increase according to the Payroll Growth.

Mortality

Healthy employees and retirees: SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2019 with a 3 year set forward for males no set forward for females

Disabled retirees: SOA Pub-2010 General Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2019

Surviving Spouses: SOA Pub-2010 Continuing Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2019 with no set forward for males and a 2 year set forward for females

Disability

Sample rates are as shown below.

Age	Rate
20	0.10%
30	0.10%
40	0.30%
50+	0.50%

Health Care Coverage Election Rate

Active Employees

100% of active employees with current coverage are assumed to elect coverage at retirement. Active employees with no current coverage are assumed not to elect coverage at retirement.

Inactive Employees

Based on actual data

Spousal Coverage

80% of male and 40% of female employees are assumed to be married upon retirement. Husbands are assumed to be three years older than wives.

Spousal coverage for current retirees is based on actual data.



Actuary's Notes (INDIANA STATE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Interim year valuation results have been projected from the prior year's valuation with adjustments for actual medical/Rx claims and enrollment experience for the 24 months ending May 2020 (with 60% weight on the most recent 12 months) and premium rate changes from 2020 to 2021. Making this change resulted in a decrease in liabilities.

Premium Rates

The monthly retiree contributions are set equal to the premium rates effective on January 1, 2020 and 2021 (as determined by the Indiana State Police) for the plans as shown below:

	Eff. 1/1/2020		Eff. 1/1/2021	
	Retiree Only	Retiree plus One Dependent	Retiree Only	Retiree plus One Dependent
<u>Without Medicare</u>				
Basic Plan	\$ 457.73	\$ 611.28	\$ 457.73	\$ 611.28
Optional Plan	\$ 535.23	\$ 759.29	\$ 535.23	\$ 759.29
<u>With Medicare</u>				
Medicare Advantage	\$ 202.07	\$ 404.14	\$ 184.57	\$ 369.14

SECTION E – CONSERVATION AND EXCISE POLICE



GASB Disclosures (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2019/20	FY 2018/19	FY 2017/18
Total OPEB Liability			
Total OPEB liability – beginning of year	\$ 76,898,620	\$ 60,902,667	\$ 56,023,950
Service cost	2,367,309	1,840,364	1,794,865
Interest	2,646,881	2,410,074	2,035,351
Changes of benefit terms	0	2,112,887	0
Changes in assumptions	(23,750,835)	6,222,558	(3,386,967)
Differences between expected and actual experience	(7,899,725)	4,353,479	5,738,944
Benefit payments	(987,561)	(943,409)	(1,303,476)
Net change in total OPEB liability	\$ (27,623,931)	\$ 15,995,953	\$ 4,878,717
Total OPEB liability – end of year	\$ 49,274,689	\$ 76,898,620	\$ 60,902,667
Plan Fiduciary Net Position			
Plan fiduciary net position – beginning of year	\$ 23,722,678	\$ 20,235,818	\$ 15,175,762
Contributions – employer	4,166,567	4,020,900	6,240,555
Contributions – active employees	0	0	0
Net investment income	347,133	492,902	213,433
Benefit payments	(987,561)	(943,409)	(1,303,476)
Trust administrative expenses	(76,719)	(83,533)	(90,456)
Net change in plan fiduciary net position	\$ 3,449,420	\$ 3,486,860	\$ 5,060,056
Plan fiduciary net position – end of year	\$ 27,172,098	\$ 23,722,678	\$ 20,235,818
Net OPEB Liability – end of year	\$ 22,102,591	\$ 53,175,942	\$ 40,666,849
Plan fiduciary net position as % of total OPEB liability	55.1%	30.8%	33.2%
Covered employee payroll ¹²	\$ 18,165,798	\$ 17,722,730	\$ 16,842,290
Net OPEB liability as % of covered payroll	121.7%	300.0%	241.5%

¹² FY 2019/20 covered payroll is based on payroll for FY 2018/19 increased by the payroll growth assumption (2.50%).



GASB Disclosures (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below prior to FY 2016/17 are based on the Annual Required Contribution (ARC) calculated in prior GASB 45 actuarial valuations as shown in the Plan Sponsor financial statements.

	FY 2019/20		FY 2018/19		FY 2017/18		FY 2016/17		FY 2015/16	
Actuarially Determined Contribution (ADC)	\$	5,599,619 ¹³	\$	3,774,197	\$	3,831,452	\$	3,348,809	\$	3,312,731
Contributions in relation to the ADC ¹⁴		4,166,567		4,020,900		6,240,555		3,717,824		3,575,032
Contribution deficiency / (excess)	\$	1,433,052	\$	(246,703)	\$	(2,409,103)	\$	(369,015)	\$	(262,301)

Covered employee payroll	\$	18,165,798	\$	17,722,730	\$	16,842,290	\$	16,471,677	\$	14,497,000
Contribution as a % of covered employee payroll		22.9%		22.7%		37.1%		22.6%		24.7%

	FY 2014/15		FY 2013/14		FY 2012/13		FY 2011/12		FY 2010/11	
Actuarially Determined Contribution (ADC)	\$	3,123,622	\$	2,821,614	\$	3,052,678	\$	3,674,720	\$	4,423,420
Contributions in relation to the ADC ⁹		2,436,777		2,482,148		2,892,842		6,889,202		1,335,846
Contribution deficiency / (excess)	\$	686,845	\$	339,466	\$	159,836	\$	(3,214,482)	\$	3,087,574

Covered employee payroll	\$	15,106,000	\$	15,969,000	\$	25,532,000	\$	12,600,000	\$	N/A
Contribution as a % of covered employee payroll		16.1%		15.5%		11.3%		54.7%		N/A

¹³ Refer to the Actuarially Determined Contributions section for the calculation details.

¹⁴ Includes employer contribution for pay-go cost paid from General Fund and pre-funding contributions deposited into the OPEB Trust.



GASB Disclosures (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

OPEB Expense

<i>OPEB Expense</i>	<i>FY 2019/20</i>	<i>FY 2018/19</i>
Discount rate as of beginning of fiscal year	3.36%	3.87%
Discount rate as of end of fiscal year	6.20%	3.36%
Service cost	\$ 2,367,309	\$ 1,840,364
Interest	2,646,881	2,410,074
Changes of benefit terms	0	2,112,887
Projected earnings on OPEB plan investments	(820,996)	(705,927)
Reduction for contributions from active employees	0	0
OPEB plan administrative expenses	76,719	83,533
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ 133,021	\$ 1,261,553
Changes in assumptions	(3,038,527)	354,449
Net difference between projected and actual earnings on OPEB plan investments	208,959	114,186
Total current period recognition	\$ (2,696,547)	\$ 1,730,188
Total OPEB expense	\$ 1,573,366	\$ 7,471,119



GASB Disclosures (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Difference between projected and actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average future service to retirement while the difference between projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

<i>Differences between expected and actual experience for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ 5,738,944	8	\$ 717,368	\$ 3,586,840
June 30, 2019	\$ 4,353,479	8	\$ 544,185	\$ 3,265,109
June 30, 2020	\$ (7,899,725)	7	\$ (1,128,532)	\$ (6,771,193)

<i>Changes in assumptions for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ (3,386,967)	8	\$ (423,371)	\$ (2,116,854)
June 30, 2019	\$ 6,222,558	8	\$ 777,820	\$ 4,666,918
June 30, 2020	\$ (23,750,835)	7	\$ (3,392,976)	\$ (20,357,859)

<i>Net difference between projected and actual earnings in OPEB plan investments for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2020</i>
June 30, 2018	\$ 357,907	5	\$ 71,581	\$ 143,164
June 30, 2019	\$ 213,025	5	\$ 42,605	\$ 127,815
June 30, 2020	\$ 473,863	5	\$ 94,773	\$ 379,090



GASB Disclosures (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Deferred Outflows / (Inflows) of Resources – Continued

<i>As of fiscal year ending June 30, 2020</i>	<i>Deferred Outflows</i>	<i>Deferred Inflows</i>
Differences between expected and actual experience	\$ 6,851,949	\$ (6,771,193)
Changes in assumptions	4,666,918	(22,474,713)
Net difference between projected and actual earnings in OPEB plan investments	650,069	0
Total	\$ 12,168,936	\$ (29,245,906)

Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2020 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

<i>FYE</i>	<i>Balance</i>
2021	\$ (2,696,547)
2022	\$ (2,696,545)
2023	\$ (2,768,128)
2024	\$ (2,810,735)
2025	\$ (2,905,505)
Thereafter	\$ (3,199,510)



GASB Disclosures (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2020, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 6.20%.
- The 1% decrease in discount rate would be 5.20%.
- The 1% increase in discount rate would be 7.20%.

<i>As of June 30, 2020</i>	<i>Net OPEB Liability</i>	
1% Decrease	\$	29,255,390
Current Discount Rate	\$	22,102,591
1% Increase	\$	16,261,130

The following presents the net OPEB liability as of June 30, 2020, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 7.5% decreasing by 0.5% annually to an ultimate rate of 4.5%.
- The 1% decrease in health care trend rates would assume an initial rate of 6.5% decreasing by 0.5% annually to an ultimate rate of 3.5%.
- The 1% increase in health care trend rates would assume an initial rate of 8.5% decreasing by 0.5% annually to an ultimate rate of 5.5%.

<i>As of June 30, 2020</i>	<i>Net OPEB Liability</i>	
1% Decrease	\$	15,227,569
Current Health Care Trend Rates	\$	22,102,591
1% Increase	\$	30,772,352



Asset Information (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Asset Information

<i>Asset Breakdown</i>	<i>FY 2018/19</i>	<i>FY 2019/20</i>
Assets		
Cash and cash equivalents	\$ 853,240	\$ 378,235
Securities lending cash collateral	0	0
Total cash	\$ 853,240	\$ 378,235
Receivables		
Contributions	\$ 0	\$ 0
Accrued interest	29,341	2,869
Total receivables	\$ 29,341	\$ 2,869
Investments		
Debt Securities	\$ 22,927,878	\$ 26,896,478
Equities	0	0
Mutual Funds	0	0
Other	0	0
Total investments	\$ 22,927,878	\$ 26,896,478
Total assets	\$ 23,810,459	\$ 27,277,582
Liabilities		
Payables		
Investment management fees	\$ 0	\$ 0
Benefits	87,781	105,484
Total liabilities	\$ 87,781	\$ 105,484
Net position restricted to OPEB	\$ 23,722,678	\$ 27,172,098



Asset Information (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Asset Information

<i>Asset Reconciliation</i>	<i>FY 2018/19</i>	<i>FY 2019/20</i>
Additions		
Contributions received		
Employer	\$ 4,020,900	\$ 4,166,567
Employee	0	0
Total contributions	\$ 4,020,900	\$ 4,166,567
Investment income		
Net increase in fair value of investments	\$ 492,902	\$ 347,133
Interests and dividends	0	0
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 492,902	\$ 347,133
Total additions	\$ 4,513,802	\$ 4,513,700
Deductions		
Benefit payments (net of retiree contributions)	\$ (943,409)	\$ (987,561)
Administrative expenses	(83,533)	(76,719)
Other	0	0
Total deductions	\$ (1,026,942)	\$ (1,064,280)
Net increase in net position	\$ 3,486,860	\$ 3,449,420
Net position restricted to OPEB		
Beginning of year	20,235,818	23,722,678
End of year	\$ 23,722,678	\$ 27,172,098



Actuarially Determined Contributions (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

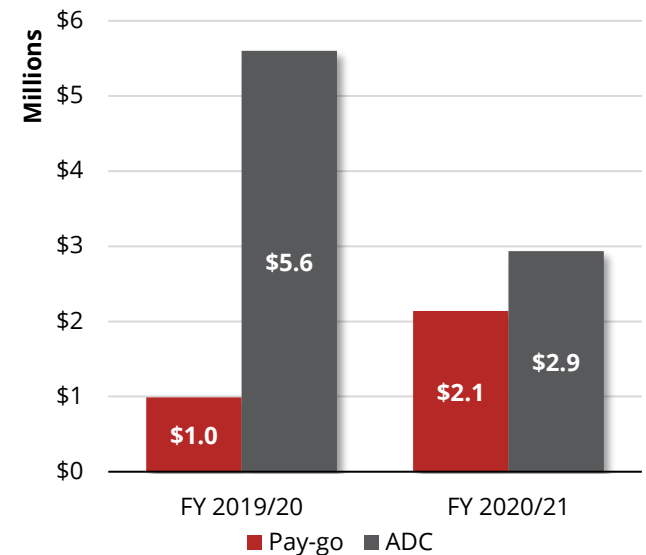
The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the Plan Sponsor has the ability to contribute these amounts on an annual basis. The Plan Sponsor has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

	FY 2019/20	FY 2020/21
Discount rate	3.25%	6.20%
Payroll growth factor used for amortization	N/A	N/A
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level Dollar	Level Dollar
Amortization period	27 years	26 years
Actuarial accrued liability (AAL) – beginning of year	\$ 78,346,068	\$ 49,274,689
Actuarial value of assets – beginning of year	(23,722,678)	(27,172,098)
Unfunded AAL – beginning of year	\$ 54,623,390	\$ 22,102,591
Normal Cost	\$ 2,450,373	\$ 1,130,554
Amortization of UAAL	2,972,987	1,631,912
Total normal cost plus amortization	\$ 5,423,360	\$ 2,762,466
Interest to the end of year	176,259	171,273
Actuarially Determined Contribution – Preliminary	\$ 5,599,619	\$ 2,933,739
Expected benefit payments ¹⁵	987,561	2,138,988
Actuarially Determined Contribution – Final¹⁶	\$ 5,599,619	\$ 2,933,739

¹⁵ Actual for FY 2019/20

¹⁶ Set to be the greater of the preliminary ADC and expected benefit payments.

Cash vs Accrual Accounting



Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.



Discussion of Discount Rates (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale) must be used.

For the current valuation:

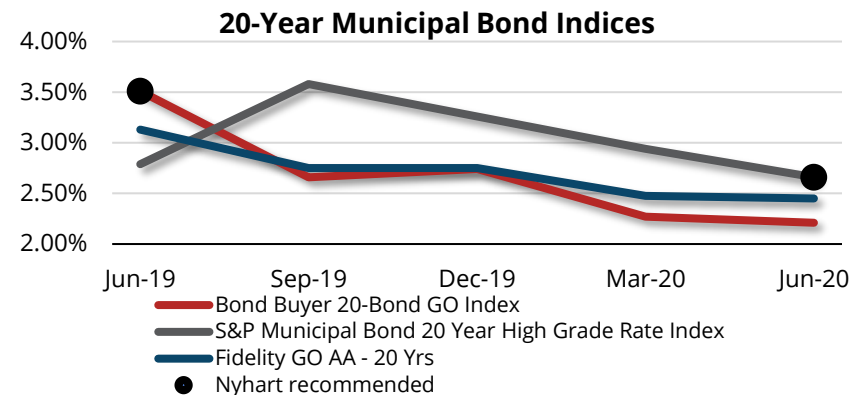
1. The long-term expected rate of return on OPEB plan investment is 6.20%, which is based on the asset allocation being similar to the investment of the ISP OPEB Trust. The expected future real rates of return as shown in the State of Indiana 2019 CAFR for the ISP Pension Plan are shown below. Inflation is expected to be 2.25%. The best estimates of arithmetic real rates of return for each major asset class included in the OPEB Plan's target asset allocation as of June 30, 2020 are summarized in the following table.

Asset Class	Target Allocation	L/T Expected Real ROR
Broad US Equity	29%	6.9%
Global ex-US Equity	13%	7.1%
Domestic Fixed	17%	3.0%
High Yield	5%	4.8%
Short Duration	4%	2.6%
Cash Equivalents	2%	2.3%
Hedge Funds	25%	5.1%
Real Estate	5%	5.8%

2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments are selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

Yield as of	July 1, 2019	June 30, 2020
Bond Buyer Go 20-Bond Municipal Bond Index	3.51%	2.21%
S&P Municipal Bond 20-Year High Grade Rate Index	2.79%	2.66%
Fidelity 20-Year Go Municipal Bond Index	3.13%	2.45%
Bond Index Range	2.79% - 3.51%	2.21% - 2.66%
Actual Discount Rate Used	3.51%	2.66%

3. The final equivalent single discount rate used for this year's valuation is 3.36% as of July 1, 2019 and 6.20% as of June 30, 2020 based on the expectation that the CEP will continue to make contributions equal to the benefit payments each year plus additional pre-funding contributions of \$2.9 million per year (based on actual pre-funding contributions over the past four years).





Summary of Key Actuarial Assumptions (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

For a complete summary of actuarial methods and assumptions, refer to the GASB 74/75 actuarial valuation report for the fiscal year ending June 30, 2019.

Measurement Date

For fiscal year ending June 30, 2020, a June 30, 2020 measurement date was used.

Actuarial Valuation Date

July 1, 2019 with results actuarially projected on a “no gain / no loss” basis to get to the June 30, 2020 measurement date. Liabilities as of July 1, 2019 are based on an actuarial valuation date of July 1, 2019.

Discount Rate

3.36% as of July 1, 2019 and 6.20% as of June 30, 2020 for accounting disclosure purposes
Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

Payroll Growth

2.75% for general wage inflation (includes 2.25% inflation and 0.50% real wage growth) plus the following merit and productivity increases which are based on the assumptions approved from the Indiana Public Retirement System (INPRS) 2020 Experience Study.

YOS	CEP
0	2.25%
5	1.00%
9+	0.00%

Inflation Rate

2.25% per year

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant’s benefit at retirement; and
- Annual Service Cost is a constant percentage of the participant’s salary that is assumed to increase according to the Payroll Growth.



Summary of Key Actuarial Assumptions (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Health Care Trend Rates

FYE	Medical/Rx	FYE	Medical/Rx
2021	7.5%	2025	5.5%
2022	7.0%	2026	5.0%
2023	6.5%	2027+	4.5%
2024	6.0%		

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Dental and vision costs are assumed to increase by 3.0% in the future.

Health Care Coverage Election Rate

Active Employees

100% of active employees with current coverage are assumed to elect coverage at retirement. Active employees with no current coverage are assumed not to elect coverage at retirement.

Inactive Employees

Based on actual data.

Spousal Coverage

85% of male and 15% of female employees are assumed to be married upon retirement. Husbands are assumed to be three years older than wives.

Spousal coverage for current retirees is based on actual data.

Mortality

Healthy employees and retirees: SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2019 with a 3 year set forward for males no set forward for females

Disabled retirees: SOA Pub-2010 General Disabled Retiree Headcount Weighted Mortality Table fully generational using Scale MP-2019

Surviving Spouses: SOA Pub-2010 Continuing Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2019 with no set forward for males and a 2 year set forward for females



Summary of Key Actuarial Assumptions (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Disability

Sample rates are as shown below.

Age	Rate
20	0.10%
30	0.10%
40	0.30%
50+	0.50%

Retirement Rate

Annual retirement rates are as shown below.

Age	0 - 9 YOS	10 - 14 YOS	15 - 24 YOS	25+ YOS
45 - 49	0%	0%	2%	2%
50 - 54	0%	0%	2%	20%
55 - 58	0%	0%	2%	25%
59	0%	0%	2%	35%
60	0%	55%	55%	55%
61	0%	65%	65%	65%
62 - 64	0%	75%	75%	75%
65+	0%	100%	100%	100%



Actuary's Notes (CONSERVATION AND EXCISE POLICE)

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Interim year valuation results have been projected from the prior year's valuation with adjustments for actual medical/Rx claims and enrollment experience for the 24 months ending May 2020 (with 60% weight on the most recent 12 months) and premium rate changes from 2020 to 2021. The medical premium for the post-65 Medicare Advantage plan was \$375.03 effective January 1, 2020 and \$372.47 effective January 1, 2021. Making this change resulted in a decrease in liabilities.

Additionally, we have updated the discount rate assumption based on a blended rate using the expected rate of return on assets for years when investments are expected to be sufficient to pay the projected benefit payments and the yield 20-year tax-exempt general obligation municipal bonds for years when investments are insufficient to cover future benefit payments. The discount rate is 6.20% as of June 30, 2020 and 3.36% as of July 1, 2019. Refer to the Discussion of Discount Rates section for more information on selection of the discount rate. Making this change resulted in a reduction in liabilities.

Retiree Contributions

A comparison of monthly retiree contributions effective on January 1, 2020 and January 1, 2021 as determined by CEP are as shown below.

	Eff. 1/1/2020			Eff. 1/1/2021		
	Single	Member + Spouse	Incremental Spouse Cost	Single	Member + Spouse	Incremental Spouse Cost
Pre-Medicare	\$ 378.23	\$ 718.53	\$ 340.30	\$ 385.79	\$ 752.30	\$ 366.51
Post-Medicare	\$ 147.38	\$ 294.76	\$ 147.38	\$ 150.33	\$ 300.66	\$ 150.33

SECTION F – APPENDIX



Appendix

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Appendix A – Analysis of Health Care Coverage Election Rate

The health care coverage election rate assumption for State Personnel and Legislators was reviewed using data on all OPEB-eligible retirements during the period from July 2015 through June 2019 provided to Nyhart by INPRS. This data was then compared with the valuation data used for the full valuations completed as of June 30, 2016, 2017, and 2019 (depending on date of retirement) to determine which retirees elected health coverage upon retirement. If a record was provided for an individual that was not included in the valuation data for a given year, they were excluded from our analysis. A table showing the results of this analysis is shown below.

Based on this analysis, we have updated the health care coverage election rate for retirees that have met the PERF eligibility for normal, unreduced or a disability pension from 40% to 35%. We have also updated the health care coverage election rate for retirees with coverage that retire prior to completing the PERF eligibility requirements for normal, unreduced or a disability pension from 15% to 10%. We feel that these election rates would be more consistent with historical experience, while still maintaining a degree of conservatism in our estimates. These changes have resulted in a decrease in liabilities.

	<i>Fully Eligible for PERF</i>	<i>Not Fully Eligible for PERF</i>
Retirees electing coverage	351	4
Retirees not elective coverage	790	63
Total retirements	1,141	67
% Electing coverage	30.8%	6.0%
Previous assumption	40.0%	15.0%
Revised assumption	35.0%	10.0%

We have not changed the health care coverage election rates for the Indiana State Police or Conservation and Excise Police due to recent changes to the structure of the retiree health benefits for these groups. We would recommend re-evaluating the experience for these groups in a few years once more experience has developed under the updated benefit structure.



Appendix

State of Indiana GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Appendix B – Analysis of Spousal Coverage Election Rate

The spousal coverage election rate was reviewed for all groups based on the census data that was used for the full valuations completed as of June 30, 2016, 2017, and 2019. The actual percentage of retirees electing spousal coverage was compared the assumption that was previously in place, and revisions to these assumptions were made where needed. In general, we have tried to use rates that are slightly higher than the percentages that have been seen historically, both to maintain conservatism (taking into account low credibility for some groups) and to reflect that some retirees may not have elected spousal coverage due to not having a spouse or due to their spouse being deceased.

This led to reductions in the spousal coverage election rate for State Personnel, Legislatures, and female Conservation and Excise Police employees. This has led to a reduction in liabilities for these groups. Spousal coverage election rates have been left unchanged for the Indiana State Police and male Conservation and Excise Police employees.

<i>% of Retirees electing spousal coverage</i>	<i>As of June 30, 2016</i>	<i>As of June 30, 2017</i>	<i>As of June 30, 2019</i>	<i>Previous Assumption</i>	<i>Revised Assumption</i>
State Personnel					
Male	11.6%	13.9%	10.5%	70.0%	20.0%
Female	9.2%	7.9%	6.7%	55.0%	15.0%
Legislature					
Male	87.0%	92.0%	82.6%	100.0%	95.0%
Female	42.9%	22.2%	36.4%	100.0%	50.0%
Indiana State Police					
Male	77.9%	77.1%	73.3%	80.0%	80.0%
Female	29.5%	43.1%	37.6%	40.0%	40.0%
Conservation and Excise Police					
Male	86.0%	82.4%	79.9%	85.0%	85.0%
Female	6.9%	6.3%	5.9%	25.0%	15.0%