



nyhart
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GASB 74/75 ACTUARIAL VALUATION

Fiscal Year Ending June 30, 2023

STATE OF INDIANA Indiana State Police

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November 20, 2023

**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 Indiana State Police 2022/23 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:

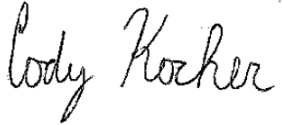
- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period);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

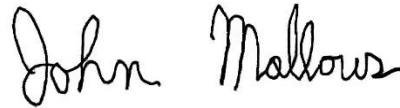
To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.

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.



Cody Kocher, ASA, MAAA
Actuary



John Mallows, FSA, MAAA
Actuary

EXECUTIVE SUMMARY



Executive Summary

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Detailed Actuary's Notes

There have been no plan provision changes since last year's interim valuation, which was for the fiscal year ending June 30, 2022.

The following assumption changes have been made for this year's valuation:

1. The mortality assumption has been updated from using the MP-2020 improvement scale to use the MP-2021 improvement scale. The base mortality tables are unchanged. This change led to a slight increase in liabilities.
2. Medical/rx trend rates have been updated to an initial rate of 7.50%/6.50% decreasing by 0.50%/0.25% per year to an ultimate rate of 4.50% for pre-65/post-65 benefits. This change caused an increase in liabilities.

Additionally, claims costs and premiums were updated for 2023/24 which caused an increase in liabilities. The updated census data resulted in an increase in liabilities.



Executive Summary

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Summary of Results

Presented below is the summary of GASB 74/75 results for the fiscal year ending June 30, 2023.

	<i>As of June 30, 2022</i>	<i>As of June 30, 2023</i>
Total OPEB Liability	\$ 172,737,071	\$ 208,027,829
Actuarial Value of Assets	(166,270,222)	(187,495,947)
Net OPEB Liability	\$ 6,466,849	\$ 20,531,882
Funded Ratio	96.3%	90.1%

	<i>FY 2021/22</i>	<i>FY 2022/23</i>
OPEB Expense	\$ (21,946,963)	\$ (17,912,143)
Annual Employer Contribution¹	\$ 14,390,962	\$ 14,266,179

	<i>As of June 30, 2022</i>	<i>As of June 30, 2023</i>
Discount Rate	6.20%	6.20%
Expected Return on Assets	6.20%	6.20%

	<i>As of June 30, 2021</i>	<i>As of June 30, 2023</i>
Total Active Participants		1,618
Total Retiree Participants		1,083

Participant counts shown above include only employees who have medical / rx coverage. Refer to Summary of Plan Participants section for an accurate breakdown of active employees with and without medical / rx coverage.

¹ Includes active employee contributions



Executive Summary

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Liabilities Breakdown

Below is a breakdown of total GASB 75 liabilities allocated to past and current service compared to the prior year. The table below also provides a breakdown of the Total OPEB Liability allocated to pre and post Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor's GASB subsidies.

<i>Present Value of Future Benefits (PVFB)</i>	<i>As of June 30, 2022</i>		<i>As of June 30, 2023</i>	
Active Employees	\$	175,318,028	\$	161,296,061
Retired Employees		64,095,368		108,753,979
Total PVFB	\$	239,413,396	\$	270,050,040

<i>Total OPEB Liability</i>	<i>As of June 30, 2022</i>		<i>As of June 30, 2023</i>	
Active Pre-Medicare	\$	88,689,515	\$	85,787,194
Active Post-Medicare		19,952,188		13,486,656
Active Liability	\$	108,641,703	\$	99,273,850
Retiree Pre-Medicare	\$	16,896,046	\$	25,374,896
Retiree Post-Medicare		47,199,322		83,379,083
Retiree Liability	\$	64,095,368	\$	108,753,979
Total OPEB Liability	\$	172,737,071	\$	208,027,829

	<i>As of June 30, 2022</i>		<i>As of June 30, 2023</i>	
Discount Rate		6.20%		6.20%

Present Value of Future Benefits (PVFB) is the amount needed as of June 30, 2022 and 2023, to fully fund the State's retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

Total OPEB Liability is the portion of PVFB considered to be accrued or earned as of June 30, 2022 and 2023. This amount is a required disclosure in the Required Supplementary Information section.



GASB Disclosures

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2022/23	FY 2021/22	FY 2020/21	FY 2019/20	FY 2018/19
Total OPEB Liability					
Total OPEB liability – beginning of year	\$ 172,737,071	\$ 168,916,685	\$ 177,447,852	\$ 198,445,243	\$ 324,517,099
Service cost	5,370,327	5,183,808	4,993,476	5,032,384	8,531,267
Interest	10,916,265	10,651,395	11,208,431	12,530,058	12,777,709
Changes of benefit terms	0	0	0	0	3,253,798
Changes in assumptions	4,341,498	0	7,028,805	(15,686,765)	(66,154,178)
Differences between expected and actual experience	18,802,128	(7,336,877)	(28,390,809)	(20,071,092)	(78,675,348)
Benefit payments	(4,139,460)	(4,677,940)	(3,371,070)	(2,801,976)	(5,805,104)
Net change in total OPEB liability	\$ 35,290,758	\$ 3,820,386	\$ (8,531,167)	\$ (20,997,391)	\$ (126,071,856)
Total OPEB liability – end of year	\$ 208,027,829	\$ 172,737,071	\$ 168,916,685	\$ 177,447,852	\$ 198,445,243
Plan Fiduciary Net Position					
Plan fiduciary net position – beginning of year	\$ 166,270,222	\$ 178,207,168	\$ 158,657,034	\$ 137,969,003	\$ 117,362,956
Contributions – employer	13,524,305	13,591,562	22,322,322	21,727,429	23,936,818
Contributions – active employees	741,874	799,400	827,523	845,660	857,420
Net investment income	11,466,903	(21,354,237)	131,020	1,276,385	2,108,792
Benefit payments	(4,139,460)	(4,677,940)	(3,371,070)	(2,801,976)	(5,805,104)
Trust administrative expenses	(367,897)	(295,731)	(359,661)	(359,467)	(491,879)
Net change in plan fiduciary net position	\$ 21,225,725	\$ (11,936,946)	\$ 19,550,134	\$ 20,688,031	\$ 20,606,047
Plan fiduciary net position – end of year	\$ 187,495,947	\$ 166,270,222	\$ 178,207,168	\$ 158,657,034	\$ 137,969,003
Net OPEB Liability – end of year	\$ 20,531,882	\$ 6,466,849	\$ (9,290,483)	\$ 18,790,818	\$ 60,476,240
Plan fiduciary net position as % of total OPEB liability	90.1%	96.3%	105.5%	89.4%	69.5%
Covered employee payroll	\$ 145,665,531	\$ 114,407,744	\$ 110,538,883	\$ 113,431,389	\$ 110,664,770
Net OPEB liability as % of covered payroll	14.1%	5.7%	-8.4%	16.6%	54.6%



GASB Disclosures

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability		FY 2017/18
Total OPEB Liability		
Total OPEB liability – beginning of year	\$	539,736,386
Service cost		17,810,791
Interest		19,725,281
Changes of benefit terms		(196,573,638)
Changes in assumptions		(27,946,460)
Differences between expected and actual experience		(21,241,592)
Benefit payments		(6,993,669)
Net change in total OPEB liability	\$	(215,219,287)
Total OPEB liability – end of year	\$	324,517,099
Plan Fiduciary Net Position		
Plan fiduciary net position – beginning of year	\$	97,322,900
Contributions – employer		25,813,525
Contributions – active employees		404,060
Net investment income		1,422,502
Benefit payments		(6,993,669)
Trust administrative expenses		(606,362)
Net change in plan fiduciary net position	\$	20,040,056
Plan fiduciary net position – end of year	\$	117,362,956
Net OPEB Liability – end of year	\$	207,154,143
Plan fiduciary net position as % of total OPEB liability		36.2%
Covered employee payroll	\$	98,338,193
Net OPEB liability as % of covered payroll		210.7%



GASB Disclosures

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

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 2022/23</i>	<i>FY 2021/22</i>	<i>FY 2020/21</i>	<i>FY 2019/20</i>	<i>FY 2018/19</i>
Actuarially Determined Contribution (ADC)	\$ 4,139,460 ²	\$ 4,613,003	\$ 5,897,655	\$ 9,116,153	\$ 18,356,134
Contributions in relation to the ADC ³	13,524,305	13,591,562	22,322,322	21,727,429	23,936,818
Contribution deficiency / (excess)	\$ (9,384,845)	\$ (8,978,559)	\$ (16,424,667)	\$ (12,611,276)	\$ (5,580,684)

Covered employee payroll	\$ 145,665,531	\$ 114,407,744	\$ 110,538,883	\$ 113,431,389	\$ 110,664,770
Contribution as a % of covered employee payroll	9.3%	11.2%	20.2%	19.2%	21.6%

	<i>FY 2017/18</i>	<i>FY 2016/17</i>	<i>FY 2015/16</i>	<i>FY 2014/15</i>	<i>FY 2013/14</i>
Actuarially Determined Contribution (ADC)	\$ 35,041,558	\$ 34,980,369	\$ 30,629,812	\$ 29,604,071	\$ 26,029,514
Contributions in relation to the ADC ³	25,813,525	26,871,267	34,862,363	25,319,778	24,834,550
Contribution deficiency / (excess)	\$ 9,228,033	\$ 8,109,102	\$ (4,232,551)	\$ 4,284,293	\$ 1,194,964

Covered employee payroll	\$ 98,338,193	\$ 96,174,272	\$ 91,753,000	\$ 92,130,000	\$ 93,630,000
Contribution as a % of covered employee payroll	26.2%	27.9%	38.0%	27.5%	26.5%

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 of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

OPEB Expense

<i>OPEB Expense</i>	<i>FY 2022/23</i>	<i>FY 2021/22</i>
Discount rate as of beginning of fiscal year	6.20%	6.20%
Discount rate as of end of fiscal year	6.20%	6.20%
Service cost	\$ 5,370,327	\$ 5,183,808
Interest	10,916,265	10,651,395
Changes of benefit terms	0	0
Projected earnings on OPEB plan investments	(10,606,728)	(11,336,390)
Reduction for contributions from active employees	(741,874)	(799,400)
OPEB plan administrative expenses	367,897	295,731
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (19,559,084)	\$ (22,245,102)
Changes in assumptions	(14,059,585)	(14,679,799)
Net difference between projected and actual earnings on OPEB plan investments	10,400,639	10,980,794
Total current period recognition	\$ (23,218,030)	\$ (25,944,107)
Total OPEB expense	\$ (17,912,143)	\$ (21,948,963)



GASB Disclosures

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

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 items 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, 2023</i>
June 30, 2018	\$ (21,241,592)	7	\$ (3,034,513)	\$ (3,034,514)
June 30, 2019	\$ (78,675,348)	7	\$ (11,239,335)	\$ (22,478,673)
June 30, 2020	\$ (20,071,092)	7	\$ (2,867,299)	\$ (8,601,896)
June 30, 2021	\$ (28,390,809)	7	\$ (4,055,830)	\$ (16,223,319)
June 30, 2022	\$ (7,336,877)	7	\$ (1,048,125)	\$ (5,240,627)
June 30, 2023	\$ 18,802,128	7	\$ 2,686,018	\$ 16,116,110

<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, 2023</i>
June 30, 2018	\$ (27,946,460)	7	\$ (3,992,351)	\$ (3,992,354)
June 30, 2019	\$ (66,154,178)	7	\$ (9,450,597)	\$ (18,901,193)
June 30, 2020	\$ (15,686,765)	7	\$ (2,240,966)	\$ (6,722,901)
June 30, 2021	\$ 7,028,805	7	\$ 1,004,115	\$ 4,016,460
June 30, 2022	\$ 0	7	\$ 0	\$ 0
June 30, 2023	\$ 4,341,498	7	\$ 620,214	\$ 3,721,284



GASB Disclosures

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Deferred Outflows / (Inflows) of Resources – Continued

<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, 2023</i>
June 30, 2019	\$ 2,003,681	5	\$ 400,737	\$ 0
June 30, 2020	\$ 7,870,405	5	\$ 1,574,081	\$ 1,574,081
June 30, 2021	\$ 10,298,656	5	\$ 2,059,731	\$ 4,119,463
June 30, 2022	\$ 32,690,627	5	\$ 6,538,125	\$ 19,614,377
June 30, 2023	\$ (860,175)	5	\$ (172,035)	\$ (688,140)

<i>As of fiscal year ending June 30, 2023</i>	<i>Deferred Outflows</i>	<i>Deferred Inflows</i>
Differences between expected and actual experience	\$ 16,116,110	\$ (55,579,029)
Changes in assumptions	7,737,744	(29,616,448)
Net difference between projected and actual earnings in OPEB plan investments	24,619,781	0
Total	\$ 48,473,635	\$ (85,195,477)

Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2023 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>
2024	\$ (23,618,771)
2025	\$ (18,165,985)
2026	\$ 464,217
2027	\$ (965,642)
2028	\$ 2,258,105
Thereafter	\$ 3,306,234



GASB Disclosures

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2023, 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, 2023</i>	<i>Net OPEB Liability</i>	
1% Decrease	\$	41,939,900
Current Discount Rate	\$	20,531,882
1% Increase	\$	1,852,301

The following presents the net OPEB liability as of June 30, 2023, 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 7.50%/6.50% (pre-/post-65) decreasing by 0.50%/0.25% annually to an ultimate rate of 4.50%.
- The 1% decrease in health care trend rates would assume an initial rate of 6.50%/5.50% (pre-/post-65) decreasing by 0.50%/0.25% annually to an ultimate rate of 3.50%.
- The 1% increase in health care trend rates would assume an initial rate of 8.50%/7.50% (pre-/post-65) decreasing by 0.50%/0.25% annually to an ultimate rate of 5.50%.

<i>As of June 30, 2023</i>	<i>Net OPEB Liability</i>	
1% Decrease	\$	265,439
Current Health Care Trend Rates	\$	20,531,882
1% Increase	\$	44,245,096



Asset Information

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Asset Information

<i>Asset Breakdown</i>	<i>FY 2021/22</i>	<i>FY 2022/23</i>
Assets		
Cash, cash equivalents, and Non-pension Investments	\$ 13,532,003	\$ 9,570,821
Securities lending cash collateral	0	0
Total cash	\$ 13,532,003	\$ 9,570,821
Receivables		
Contributions	\$ 0	\$ 0
Interest Receivable	0	0
Total receivables	\$ 0	\$ 0
Investments		
Mutual Funds – Fixed Income	\$ 18,598,216	\$ 24,661,190
Mutual Funds – Equity	93,598,501	107,721,825
Partnerships / Joint Ventures	41,183,364	45,979,447
Debt Securities	0	0
Total investments	\$ 153,380,081	\$ 178,362,462
Total assets	\$ 166,912,084	\$ 187,933,283
Liabilities		
Payables		
Investment management fees	\$ 0	\$ 0
Benefits Payable	641,862	437,336
Total liabilities	\$ 641,862	\$ 437,336
Net position restricted to OPEB	\$ 166,270,222	\$ 187,495,947



Asset Information

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Asset Information

<i>Asset Reconciliation</i>	<i>FY 2021/22</i>	<i>FY 2022/23</i>
Additions		
Contributions received		
Employer	\$ 13,491,562	\$ 13,374,305
Employee	799,400	741,874
Total contributions	\$ 14,290,962	\$ 14,116,179
Investment income		
Net increase in fair value of investments	\$ (21,354,237)	\$ 11,466,903
Other	100,000	150,000
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ (21,254,237)	\$ 11,616,903
Total additions	\$ (6,963,275)	\$ 25,733,082
Deductions		
Benefit payments (net of retiree contributions)	\$ (4,677,940)	\$ (4,139,460)
Administrative expenses	(295,731)	(367,897)
Other	0	0
Total deductions	\$ (4,973,671)	\$ (4,507,357)
Net increase in net position	\$ (11,936,946)	\$ 21,225,725
Net position restricted to OPEB		
Beginning of year	178,207,168	166,270,222
End of year	\$ 166,270,222	\$ 187,495,947



Actuarially Determined Contributions

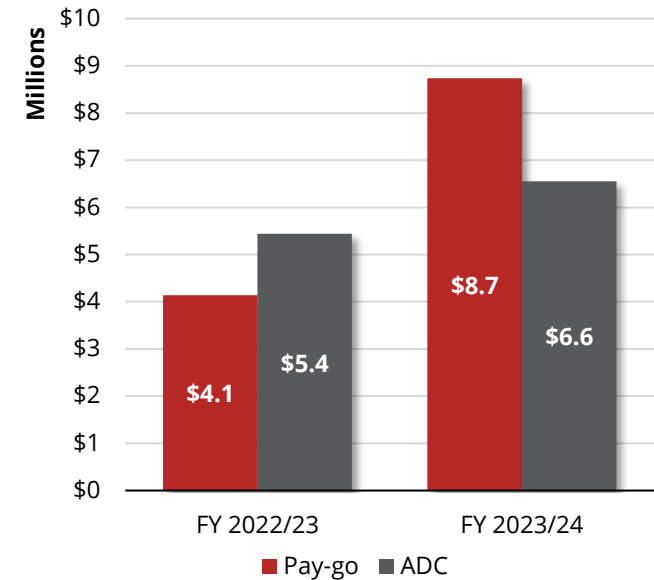
State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Actuarially Determined Contribution

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 2022/23	FY 2023/24
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	24 years	23 years
Actuarial accrued liability (AAL) – beginning of year	\$ 172,737,071	\$ 208,027,829
Actuarial value of assets – beginning of year	(166,270,222)	(187,495,947)
Unfunded AAL – beginning of year	\$ 6,466,849	\$ 20,531,882
Normal Cost ⁴	\$ 4,628,453	\$ 4,570,776
Amortization of UAAL	494,194	1,599,684
Total normal cost plus amortization	\$ 5,122,647	\$ 6,170,460
Interest to the end of year	317,604	382,569
Actuarially Determined Contribution – Preliminary	\$ 5,440,251	\$ 6,553,029
Expected benefit payments ⁵	4,139,460	8,735,512
Actuarially Determined Contribution – Final⁶	\$ 5,440,251	\$ 6,553,029

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 Reduced for active employee contributions, which were \$741,874 for FY 2022/23 and assumed to be \$767,840 for FY 2023/24 (based on FY 2022/23 contribution increased by total payroll growth assumption of 3.5%).

⁵ Actual for FY 2022/23

⁶ If fully funded under the long-term expected discount rate, an entity could contribute \$0. However, for long-term sustainability purposes, Nyhart would recommend contributing the normal cost plus interest for years in which that entity is fully funded (total for employer + employee contributions). For FY 2022/23 and 2023/24, the final recommended contribution reflects the employer only portion (the normal cost plus interest less expected active employee contributions).



Projection of GASB Results

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Projection of GASB Results

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

Unexpected Events

- Increases in TOL when actual premium rates increase more than expected. A liability decrease occurs if the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

<i>Projection of Total OPEB Liability (TOL)</i>	<i>FY 2022/23</i>	<i>FY 2023/24</i>
TOL as of beginning of year	\$ 172,737,071	\$ 208,027,829
Normal cost as of beginning of year	5,370,327	5,338,616
Exp. benefit payments during the year	(4,139,460)	(8,735,512)
Interest adjustment to end of year	10,916,265	12,961,991
Exp. TOL as of end of year	\$ 184,884,203	\$ 217,592,924
Actuarial Loss/(Gain)	23,143,626	TBD
Actual TOL as of end of year	\$ 208,027,829	\$ TBD

<i>Projection of Actuarial Value of Assets (AVA)</i>	<i>FY 2022/23</i>	<i>FY 2023/24</i>
AVA as of beginning of year	\$ 166,270,222	\$ 187,495,947
Exp. employer contributions during the year ⁷	14,116,179	23,935,512
Exp. benefit payments during the year	(4,139,460)	(8,735,512)
Exp. investment income ⁸	10,624,800	12,099,640
Exp. Trust administrative expenses	(367,897)	(414,862)
Exp. Active employee contributions ⁹	741,874	767,840
Exp. AVA as of end of year	\$ 187,245,718	\$ 215,148,565
Differences between expected and actual experience	250,229	TBD
AVA as of end of year	\$ 187,495,947	\$ TBD

⁷ Employer contribution for 2022/23 is based on actual employer contribution made into the Trust. FY 2023/24 expected employer contribution is based on the expected pay-go cost plus the average Trust contribution in the past five years, rounded down to the nearest hundred thousand.

⁸ Fiscal years 2022/23 expected investment income is based on a 6.20% asset return and 2023/24 expected investment income is calculated based on a 6.20% asset return.

⁹ Active employee contributions were \$741,874 for FY 2022/23 and assumed to be \$767,840 for FY 2023/24 (based on FY 2022/23 contribution increased by total payroll growth assumption of 3.5%).



Employer Contribution Cash Flow Projections

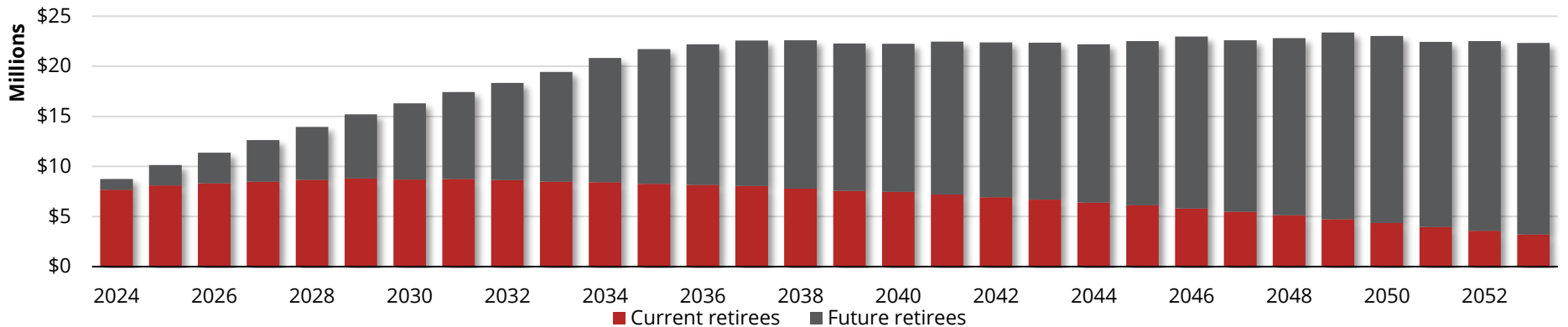
State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Employer Contribution Cash Flow Projections

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current / future retirees. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees ¹⁰	Total	FYE	Current Retirees	Future Retirees ⁸	Total	FYE	Current Retirees	Future Retirees ⁸	Total
2024	\$ 7,681,084	\$ 1,054,428	\$ 8,735,512	2034	\$ 8,422,712	\$ 12,401,279	\$ 20,823,991	2044	\$ 6,394,308	\$ 15,808,151	\$ 22,202,459
2025	\$ 8,113,482	\$ 2,016,281	\$ 10,129,763	2035	\$ 8,265,232	\$ 13,443,413	\$ 21,708,645	2045	\$ 6,116,045	\$ 16,411,353	\$ 22,527,398
2026	\$ 8,326,612	\$ 3,051,409	\$ 11,378,021	2036	\$ 8,148,200	\$ 14,048,849	\$ 22,197,049	2046	\$ 5,808,127	\$ 17,154,027	\$ 22,962,154
2027	\$ 8,478,455	\$ 4,140,603	\$ 12,619,058	2037	\$ 8,056,612	\$ 14,523,066	\$ 22,579,678	2047	\$ 5,474,275	\$ 17,111,826	\$ 22,586,101
2028	\$ 8,678,155	\$ 5,260,687	\$ 13,938,842	2038	\$ 7,792,542	\$ 14,814,949	\$ 22,607,491	2048	\$ 5,119,455	\$ 17,678,060	\$ 22,797,515
2029	\$ 8,790,735	\$ 6,406,212	\$ 15,196,947	2039	\$ 7,570,092	\$ 14,714,498	\$ 22,284,590	2049	\$ 4,718,614	\$ 18,652,654	\$ 23,371,268
2030	\$ 8,698,479	\$ 7,596,754	\$ 16,295,233	2040	\$ 7,464,793	\$ 14,793,725	\$ 22,258,518	2050	\$ 4,342,100	\$ 18,692,368	\$ 23,034,468
2031	\$ 8,758,662	\$ 8,677,307	\$ 17,435,969	2041	\$ 7,180,854	\$ 15,283,698	\$ 22,464,552	2051	\$ 3,956,079	\$ 18,486,880	\$ 22,442,959
2032	\$ 8,644,973	\$ 9,701,655	\$ 18,346,628	2042	\$ 6,931,102	\$ 15,449,662	\$ 22,380,764	2052	\$ 3,570,602	\$ 18,937,894	\$ 22,508,496
2033	\$ 8,474,823	\$ 10,961,142	\$ 19,435,965	2043	\$ 6,692,855	\$ 15,663,506	\$ 22,356,361	2053	\$ 3,190,967	\$ 19,129,480	\$ 22,320,447

Projected Employer Pay-go Cost



¹⁰ Projections for future retirees do not take into account future new hires.



Discussion of Discount Rates

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

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:

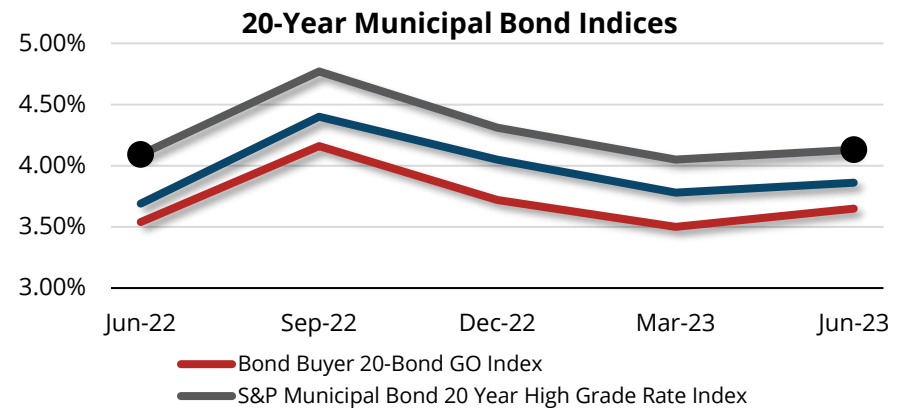
1. The long-term expected rate of return on OPEB plan investment is 6.20%. This was developed in consultation with the group’s asset advisor using a building-block approach in which expected future rates of returned are developed for each major asset class. The expected future nominal rates of return as provided by the entity’s investment advisor are shown below. Inflation is expected to be 2.00%. 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, 2023 are summarized in the following table.

Asset Class	Target Allocation	L/T Expected Real ROR (JP Morgan)
Broad US Equity	31%	7.35%
Global ex-US Equity	11%	7.45%
Core US Fixed	22%	4.25%
Defensive	4%	4.00%
Alternatives	25%	8.50%
Core Real Estate	5%	5.75%
Cash Equivalents	2%	2.75%

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	June 30, 2022	June 30, 2023
Bond Buyer Go 20-Bond Municipal Bond Index	3.54%	3.65%
S&P Municipal Bond 20-Year High Grade Rate Index	4.09%	4.13%
Fidelity 20-Year Go Municipal Bond Index	3.69%	3.86%
Bond Index Range	3.54% - 4.09%	3.65% - 4.13%
Actual Discount Rate Used	4.09%	4.13%

3. The final equivalent single discount rate used for this year’s valuation is 6.20% as of June 30, 2022 and as of June 30, 2023, with the expectation that the ISP will continue to contribute at least the Actuarially Determined Contribution each year.





Summary of Plan Participants

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Active Employees

<i>Actives with coverage</i>	<i>Single</i>	<i>Non-Single</i>	<i>Total</i>	<i>Avg. Age</i>	<i>Avg. Svc</i>	<i>Salary</i>
Optional	544	963	1,507	44.1	16.3	\$ 137,742,791
Total actives with coverage	544	963	1,507	44.1	16.3	\$ 137,742,791

<i>Actives without coverage</i>	<i>Total</i>	<i>Avg. Age</i>	<i>Avg. Svc</i>	<i>Salary</i>
Total actives without coverage	111	42.7	10.4	\$ 7,922,740

Active Age-Service Distribution

<i>Age</i>	<i>Years of Service</i>										<i>Total</i>	
	<i>< 1</i>	<i>1 to 4</i>	<i>5 to 9</i>	<i>10 to 14</i>	<i>15 to 19</i>	<i>20 to 24</i>	<i>25 to 29</i>	<i>30 to 34</i>	<i>35 to 39</i>	<i>40 & up</i>		
Under 25	22	40										62
25 to 29	13	114	39									166
30 to 34	7	57	106	21								191
35 to 39	4	18	47	73	56							198
40 to 44	5	10	11	27	120	25	1					199
45 to 49	8	2	17	17	59	110	21					234
50 to 54	4	8	9	12	31	79	144	8				295
55 to 59	1	8	6	5	8	15	36	49	15	1		144
60 to 64		5	8	4	6	7	10	13	28	2		83
65 to 69	1	2	1	4	3	4	6	2	5	10		38
70 & up		1	3	1			1			2		8
Total	65	265	247	164	283	240	219	72	48	15		1,618



Summary of Plan Participants

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Summary of Plan Participants – Retirees

<i>Retirees with coverage</i>	<i>Single</i>	<i>Non-Single</i>	<i>Total</i>	<i>Avg. Age</i>
Basic without Medicare	15	38	53	61.4
Optional without Medicare	101	191	292	62.8
Basic with Medicare	28	26	54	80.7
Optional with Medicare	296	388	684	77.4
Total retirees with coverage	440	643	1,083	72.8

In addition to the above, there are 327 retirees who currently have no health coverage with ISP but they have life insurance coverage. They have been included in the GASB valuation.

Enrollments shown above as “without Medicare” includes all pre-65 retirees on each plan and any post-65 retirees who are not Medicare eligible. Enrollments shown as “with Medicare” include only post-65 retirees who are Medicare eligible.

Retiree Age Distribution

<i>Age</i>	<i>Retirees</i>
< 45	4
45 to 49	4
50 to 54	26
55 to 59	68
60 to 64	111
65 to 69	212
70 to 74	197
75 to 79	198
80 to 84	151
85 to 89	87
90 & up	25
Total	1,083



Substantive Plan Provisions

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Eligibility

Police officers and civilian employees employed by the Indiana State Police are eligible for retiree health care benefits at the earlier of:

- a. 25 years of service
- b. Age 55 with 85 points
- c. Age 60 with 15 years of service
- d. Age 65 with 10 years of service

Spouse Coverage

Surviving spouse coverage continues for life after the death of the member (retiree or active employee). The coverage is free for six months and then it reverts to single retiree coverage.

Surviving spouses receive free coverage for life after the death of a member in the line of duty.

Medical Benefit

The same benefit options are available to retirees as active employees. All health plans are self-insured.

The Basic Plan includes medical coverage only. The Optional Plan includes medical, dental, and vision coverage.

The monthly premium rates effective on January 1, 2024 (as determined by the Indiana State Police) for the plans are as shown below:

	Retiree Only	Retiree plus One Dependent
<u>Without Medicare</u>		
Basic Plan	\$ 457.73	\$ 611.28
Optional Plan	\$ 535.23	\$ 759.29
<u>With Medicare</u>		
Medicare Advantage	\$ 152.62	\$ 305.24

State Police Explicit Subsidy

None



Substantive Plan Provisions

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Retiree Contributions

Retirees pay the full cost of the retiree health care coverage as determined by the State Police. The breakdown of retiree contributions by benefit are as shown below.

<u>Without Medicare</u>	Retiree Only	Retiree plus One Dependent	Spouse Increment
Basic Plan	\$ 457.73	\$ 611.28	\$ 153.55
Optional Plan	\$ 535.23	\$ 759.29	\$ 224.06
<u>With Medicare</u>	Retiree Only	Retiree plus One Dependent	Spouse Increment
Medicare Advantage	\$ 152.62	\$ 305.24	\$ 152.62

HRA Benefit

Effective on January 1, 2019, all post-65 Medicare eligible retirees were removed from the ISP’s traditional health plan. They are covered under a Medicare Advantage Plan through Anthem and a Medicare Part D plan with premiums paid fully by the retiree. These members will now also be given a flat HRA contribution of \$32.81 per eligible person effective January 1, 2024 for life while participating in the Medicare Advantage plan. This will continue to be available to surviving spouses of deceased retirees. The aggregate HRA contribution for all members is capped at \$1 million annually going forward. For purposes of this valuation, the HRA contribution amount provided by ISP is not assumed to increase in the future.

All post-65 non-Medicare eligible retirees will continue to be covered under ISP’s traditional health plan.

All retirees (pre and post-Medicare eligible) will continue to have dental and vision coverage with premiums paid fully by the retiree.

Life Insurance

All current and future retired Police officers are eligible for life insurance benefits \$20,000 with premiums fully paid by the ISP.

Disability Benefit

Police officers who become long-term disabled receive free health care coverage during the disability period. When they meet the requirements for retiree health care benefits they will have to make the required retiree contributions.



Substantive Plan Provisions

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Senate Enrolled Act 501

Purpose

Senate Enrolled Act 501 establishes a retirement medical benefits account for elected officers, appointed officers, and employees of the executive, legislative, and judicial branches of state government to pay for participants' medical expenses after retirement.

Effective July 1, 2011 employees of Indiana State Police, other than those who waived coverage under a common and unified plan of self-insurance provided for under IC 5-10-8-6 before July 1, 2011, are not eligible for the Senate Enrolled Act 501 retirement medical benefits account.



Actuarial Assumptions and Methods

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Measurement Date

June 30, 2023

Actuarial Valuation Date

July 1, 2023 with no adjustments to get to the June 30, 2023 measurement date. Liabilities as of June 30, 2022 are based on an actuarial valuation date of July 1, 2021 projected to June 30, 2022 with adjustments for premium and discount rate updates.

Discount Rate

6.20% as of June 30, 2022 and as of June 30, 2023 for accounting disclosure purposes; refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

6.20% as of June 30, 2022 and June 30, 2023 for calculating Actuarially Determined Contribution

Inflation Rate

2.00%

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.

Salary Scale

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%



Actuarial Assumptions and Methods

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Census Data

Census data was provided by the State and it was collected as of June 30, 2023. We have reviewed it for reasonableness and have made the following adjustment to the census data:

- Participants who were found in both State Personnel and ISP census data are included in the ISP census data for valuation purposes (or whichever group was showing health coverage for conservatism). These participants are eligible to receive retiree health care coverage through ISP once they meet the eligibility requirements.
- For participant whose date of hire provided in this year's census data was more than one year different than the date provided in prior years, the earlier of the two dates was used for conservatism.
- Only employees and retirees who were identified by the ISP as not being eligible for Medicare assumed to be ineligible for Medicare for life. Pre-65 retirees who were identified as not being Medicare eligible in the past were assumed not to be Medicare eligible. All other participants are assumed to be eligible for Medicare.

Mortality

Healthy employees and retirees: SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2021 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-2021

Surviving Spouses: SOA Pub-2010 Continuing Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2021 with no set forward for males and a 2 year set forward for females

The above tables are based on 2020 INPRS Experience Study with recent mortality improvement scales.

Withdrawal Rate

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

No withdrawal rates are assumed for police officers in the pre-1987 plan.

For police officers in the 1987 pension plan, the annual withdrawal rates are assumed to be 2% prior to age 37. For ages 37 and older the annual withdrawal rates follow the Saranson T-1 table.



Actuarial Assumptions and Methods

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Disability

Sample rates are as shown below and are based on the 2020 INPRS Experience Study.

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

Contribution Funding Policy

Indiana State Police has established a 401(h) account and Section 115 Trust for the purpose of funding retiree medical benefits since FYE June 30, 2011. Contributions to the 401(h) account and Section 115 Trust will be made from the following sources:

1. Medicare Part D retiree drug subsidy reimbursement
2. Excess Long-Term Disability (LTD) fund
3. A percentage of retiree premiums according to the following schedule:
 - a. Starting January 1, 2012 through June 30, 2014: 0%
 - b. July 1, 2014 through June 30, 2016: 25%
 - c. July 1, 2016 through June 30, 2018: 50%
 - d. July 1, 2018 onwards: 100%
4. State contributions for ISP active employees in accordance with SEA 501
5. Discretionary contributions from ISP Healthcare Fund up to \$1 million

Additionally, active employees will contribute \$20 per paycheck towards the 401(h) Trust account.

At this time, the ISP new funding policy is expected to continue for the foreseeable future.



Actuarial Assumptions and Methods

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Retirement Rate

Annual retirement rates were based on ISP's 2011 experience study.

YOS	1987 Plan ¹¹	Age	Pre-1987 Plan
25	15.0%	45	10.0%
26	12.5%	46 - 54	7.5%
27	10.0%	55	10.0%
28 - 29	7.5%	56	12.5%
30	10.0%	57	15.0%
31	12.5%	58	20.0%
32	15.0%	59 - 64	40.0%
33	40.0%	65+	100.0%
34+	27.5%		

Health Care Trend Rates

FYE	Pre-65	Post-65 ¹²
2024	7.50%	6.50%
2025	7.00%	6.25%
2026	6.50%	6.00%
2027	6.00%	5.75%
2028	5.50%	5.50%
2029	5.00%	5.25%
2030	4.50%	5.00%
2031	4.50%	4.75%
2032+	4.50%	4.50%

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 costs are assumed to increase by 4.00% in the future and vision costs are assumed to increase by 3.00% in the future.

Retiree Contributions

Retiree contributions are assumed to increase with health care trend rates.

¹¹ 100% retirement is assumed for all participants upon reaching age 65.

¹² Post-65 trend rates do not include adjustments for the impact of changes to the Medicare Advantage program under the Inflation Reduction Act beginning in 2025 due to uncertainty about the impact of these changes on overall plan costs in the future.



Actuarial Assumptions and Methods

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

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.

Per Capita Costs

Annual per capita costs are based on medical and prescription drug claims and enrollment data for the 24-month period ending May 31, 2023 projected to 2023/24 plan year and includes projected administrative expenses effective on January 1, 2024. The per capita costs were actuarially increased to a retiree-basis using health index factors and enrollment. These costs are assumed to increase with health care trend rates.

Age	Pre-65 Retirees		Age	Retirees without Medicare	
	Male	Female		Male	Female
<55	\$ 9,400	\$ 10,800	65 – 69	\$ 16,600	\$ 16,600
55 – 59	\$ 12,700	\$ 12,300	70 – 74	\$ 17,900	\$ 17,900
60 – 64	\$ 16,700	\$ 15,100	75+	\$ 19,200	\$ 19,200

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

Per capita costs for post-65 retirees and disabled retirees are Medicare eligible are assumed to be equal to the premium rate of the Medicare Advantage plan (\$152.62 per month). Post-65 ISP retirees also receive the ISP's HRA benefit, which is \$32.81 per month effective January 1, 2024.

Annual dental and vision per capita costs are \$578 and \$57 respectively for those enrolled in the Optional plan and they are expected to increase according to dental and vision trend rates. These costs are based on claims and enrollment data for the 24-month period ending May 31, 2023 projected to 2023/24 plan year and includes projected administrative expenses effective on January 1, 2024.



Actuarial Assumptions and Methods

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Dependent Liability

A 1% load is applied to pre-65 per capita costs to adjust for costs related to non-spouse dependents.

Data Assumptions

15% of future retirees are assumed to elect the Basic Plan (without dental and vision benefits).

Explicit Subsidy

The difference between (a) the medical portion of the premium rate approved by ISP and (b) the retiree contribution for medical benefits. Below is an example of the monthly explicit subsidy for a retiree under age 62 enrolled in the Optional plan.

	Premium Rate	Retiree Contribution	Explicit Subsidy
	A	B	C = A - B
Retiree	\$ 535.23	\$ 535.23	\$ 0.00
Spouse	\$ 224.06	\$ 224.06	\$ 0.00

Implicit Age Subsidy

The difference between (a) the per capita cost as determined by Nyhart and (b) the rate approved by ISP. Below is an example of the monthly implicit subsidies for a male retiree age 62 enrolled in the Optional plan with spouse of the same age.

	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A - B
Retiree	\$ 1,391.67	\$ 535.23	\$ 856.44
Spouse	\$ 1,258.33	\$ 224.06	\$ 1,034.27

All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.



Actuarial Assumptions and Methods

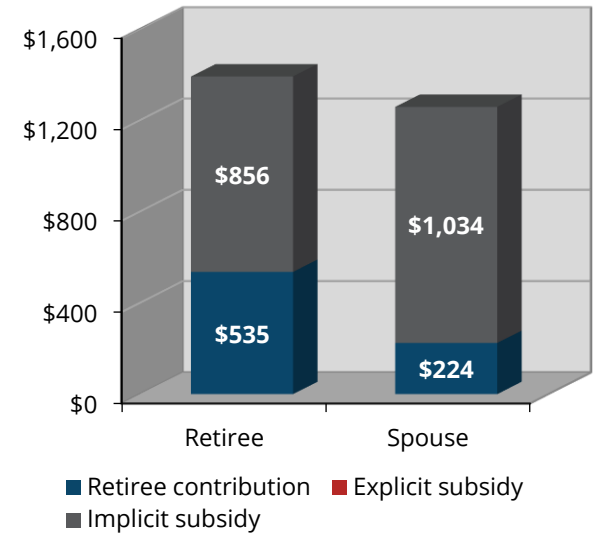
State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

GASB Subsidy Breakdown

Below is a breakdown of the GASB 74/75 monthly total cost for a male retiree age 62 enrolled in the Optional Plan with spouse of the same age for medical benefits only.

	Retiree		Spouse	
Retiree contribution	\$	535.23	\$	224.06
Explicit subsidy	\$	0.00	\$	0.00
Implicit subsidy	\$	856.44	\$	1,034.27
Total monthly cost	\$	1,391.67	\$	1,258.33

GASB Subsidy Breakdown



Actuarial Assumptions and Methods

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Models

ProVal	Valuation software developed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing postretirement medical valuations. We coded the plan provisions, assumptions, methods and participant data summarized in this report, and reviewed the liability and cost outputs for reasonableness. We are not aware of any weakness or limitations in the software and have determined it is appropriate for performing this valuation.
HealthMAPS Manual	Rating manual developed by WTW. Aging factors are used to develop per capita costs by age for plans with limited credible exposure to develop plan-specific factors. We are not aware of any weakness or limitations in the factors and have determined they are appropriate for performing this valuation.

APPENDIX



Appendix

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Appendix A – Comparison of Participant Demographic Information

	<i>As of June 30, 2021</i>	<i>As of June 30, 2023</i>
Active Participants ¹³	1,662	1,618
Retired Participants ¹⁴	1,058	1,083
Averages for Active		
Age	43.7	44.0
Service	16.1	15.9
Averages for Inactive		
Age	72.5	72.8

¹³ Only includes employees who have medical / rx coverage. Refer to Summary of Plan Participants section for an accurate breakdown of active employees with and without medical / rx coverage.

¹⁴ The retired enrollment figures above exclude spouses of current retirees and those who currently have no medical / rx coverage. Refer to Summary of Plan Participants section for an accurate breakdown of retirees with and without medical / rx coverage.



Appendix

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

Appendix B – Data Reconciliation

	<i>Indiana State Police</i>
Active employees with coverage	
Actives as of June 30, 2021	1,662
Terminated	(136)
New hires	121
Active employees who retired	(124)
Retirees who returned to active employment	1
Other adjustment ¹⁵	(17)
Actives as of June 30, 2023	1,507
Retirees with coverage	
Retirees as of June 30, 2021	900
Active employees who retired	78
Retirees who returned to active employment	
Retirees who dropped coverage or passed away without beneficiaries	(71)
Retirees who passed away with beneficiaries	(7)
New retirees ¹⁶	12
Other adjustment	(21)
Retirees as of June 30, 2023	891
Beneficiaries with coverage	
Beneficiaries as of June 30, 2021	157
Active/retirees who passed away with beneficiaries	66
Beneficiaries who dropped coverage or are listed as retiree	(31)
Beneficiaries as of June 30, 2023	192

¹⁵ This line shows adjustments for participants who have changed health plan enrollment status from June 30, 2021 to June 30, 2023 (i.e. those who did not have coverage before but are currently enrolled, and vice versa).

¹⁶ This line shows new retirees who were not found as active employees in June 30, 2021 census data or those who were previously active in a different employee group.

GLOSSARY



Glossary – Decrements Exhibit

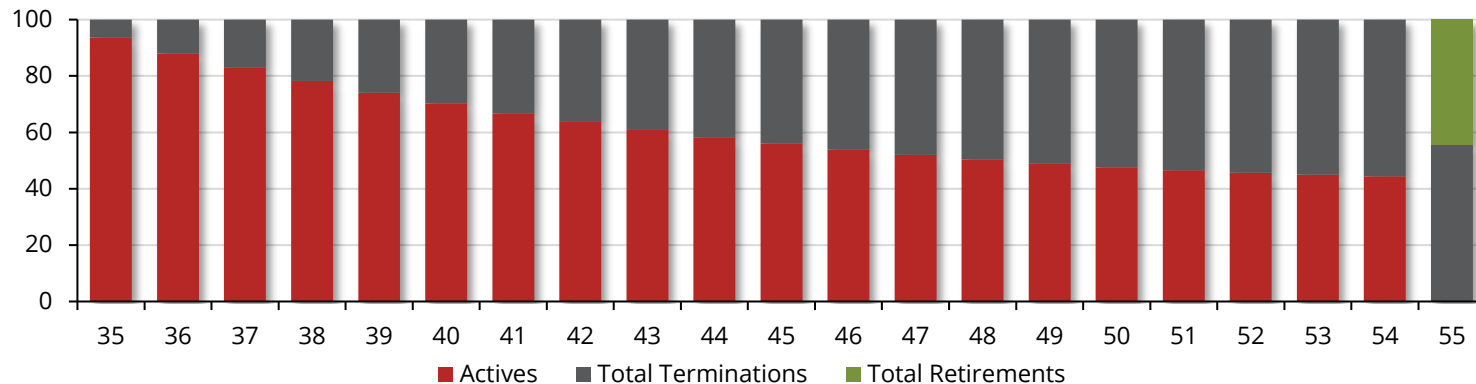
State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.43 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

Age	# Remaining Employees	# of Terminations per Year ¹⁷	# of Retirements per Year	Total Decrements
35	100.000	6.276	0.000	6.276
36	93.724	5.677	0.000	5.677
37	88.047	5.136	0.000	5.136
38	82.911	4.648	0.000	4.648
39	78.262	4.209	0.000	4.209
40	74.053	3.814	0.000	3.814
41	70.239	3.456	0.000	3.456
42	66.783	3.131	0.000	3.131
43	63.652	2.835	0.000	2.835
44	60.817	2.564	0.000	2.564
45	58.253	2.316	0.000	2.316

Age	# Remaining Employees	# of Terminations per Year	# of Retirements per Year	Total Decrements
46	55.938	2.085	0.000	2.085
47	53.853	1.866	0.000	1.866
48	51.987	1.656	0.000	1.656
49	50.331	1.452	0.000	1.452
50	48.880	1.253	0.000	1.253
51	47.627	1.060	0.000	1.060
52	46.567	0.877	0.000	0.877
53	45.690	0.707	0.000	0.707
54	44.983	0.553	0.000	0.553
55	44.430	0.000	44.430	44.430

Decrements Exhibit



¹⁷ The above rates are illustrative rates and are not used in our GASB calculations.

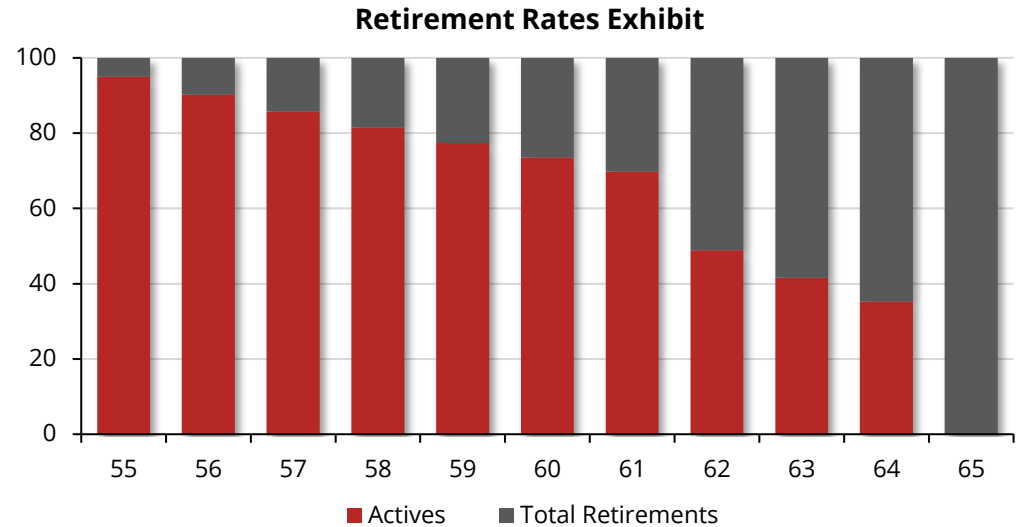


Glossary – Retirement Rates Exhibit

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

Age	Active Employees BOY	Annual Retirement Rates*	# Retirements per Year	Active Employees EOY
55	100.000	5.0%	5.000	95.000
56	95.000	5.0%	4.750	90.250
57	90.250	5.0%	4.513	85.738
58	85.738	5.0%	4.287	81.451
59	81.451	5.0%	4.073	77.378
60	77.378	5.0%	3.869	73.509
61	73.509	5.0%	3.675	69.834
62	69.834	30.0%	20.950	48.884
63	48.884	15.0%	7.333	41.551
64	41.551	15.0%	6.233	35.318
65	35.318	100.0%	35.318	0.000



* The above rates are illustrative rates and are not used in our GASB calculations.



Glossary – Definitions

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

GASB 75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care 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.
2. **Actuarial Cost Method** – A procedure for determining the Actuarial Present Value of Future Benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Service Cost and a Total OPEB Liability.
3. **Actuarially Determined Contribution** - A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.
4. **Actuarial Present Value** – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
 - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
 - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
 - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
5. **Deferred Outflow / (Inflow) of Resources** – represents the following items that have not been recognized in the OPEB Expense:
 - a. Differences between expected and actual experience of the OPEB plan
 - b. Changes in assumptions
 - c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)
6. **Explicit Subsidy** – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
7. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the Total OPEB Liability.



Glossary – Definitions

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

8. **Healthcare Cost Trend Rate** – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
9. **Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
10. **OPEB** – Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
11. **OPEB Expense** – Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.
12. **Pay-as-you-go** – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
13. **Per Capita Costs** – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
14. **Present Value of Future Benefits** – Total projected benefits include all 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) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected 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. Expressed another way, 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 total projected benefits when due.
15. **Real Rate of Return** – the rate of return on an investment after adjustment to eliminate inflation.



Glossary – Definitions

State of Indiana Indiana State Police GASB 74/75 Valuation for Fiscal Year Ending June 30, 2023

16. **Select and Ultimate Rates** – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% select rates, and 7% is the ultimate rate.
17. **Service Cost** – The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.
18. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.
19. **Total OPEB Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).