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Indiana Public Retirement System

Excise, Gaming and Conservation Officers' Retirement Fund

Actuarial Valuation as of
June 30, 2023

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The experience and dedication you deserve

November 7, 2023

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

Dear Members of the Board:

At your request, we performed an actuarial valuation of the Excise, Gaming and Conservation Officers' Fund (EG&C) as of June 30, 2023, for the purpose of estimating the actuarial determined contribution rate for the calendar year 2025. Actuarial valuations are performed annually. The major findings of the valuation are contained in this report, which reflects the benefit and funding provisions in place on June 30, 2023. There were no changes to the ongoing benefit provisions, actuarial assumptions, or actuarial methods from last year.

In preparing our report, we relied, without audit, on information (some oral and some in writing) supplied by Indiana Public Retirement System (INPRS) staff. This information includes, but is not limited to, statutory provisions, member data and financial information. We did review the data to ensure that it was reasonably consistent and comparable with data from prior years. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

We certify that all costs and liabilities for EG&C have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the plan and reasonable expectations); and which, in combination, offer the best estimate of anticipated experience affecting the plan. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions.

We believe the actuarial assumptions used herein are reasonable. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C. Specifically, we presented the proposed assumptions for the 2023 valuations to the Board on February 14, 2023, and the Board subsequently adopted their use at its May 5, 2023 meeting. These assumptions are applicable to both the funding and Governmental Accounting Standards Board (GASB) Statement Number 67 valuation calculations, unless otherwise noted.

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In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results. 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 or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

We prepared a Risk Report for the INPRS Board in August 2019 that contains information which is relevant to EG&C and should be considered part of this valuation report. Although the report was prepared using the data, methods, and assumptions of the June 30, 2018 valuation report, it is our professional opinion that the general results of the risk report are applicable to the June 30, 2023 valuation report as well.

Actuarial computations presented in this report are for purposes of determining the funding rates for the Plan. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Plan’s funding requirements and goals as adopted by the Board. Additionally, we have included actuarial computations for use in preparing certain reporting and disclosure requirements under Governmental Accounting Standards Board Statements Number 67 and Number 68. Determinations for purposes other than meeting these funding and disclosure requirements may be significantly different from the results contained in this report and require additional analysis.

The Annual Comprehensive Financial Report (ACFR) for INPRS contains several exhibits that disclose the actuarial position of the System. This annual report, prepared as of June 30, 2023, provides data and tables that we prepared for use in the following sections of the ACFR:

Financial Section:
- Note 1 - Tables of Plan Membership
- Note 8 - Net Pension Liability and Actuarial Information - Defined Benefit Plans
- Schedule of Changes in Net Pension Liability and Plan Fiduciary Net Position
- Schedule of Contributions
- Schedule of Notes to Required Supplementary Information

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

Statistical Section:

- Membership Data Summary
- Ratio of Active Members to Annuitants
- Schedule of Benefit Recipients by Type of Benefit Option
- Schedule of Average Benefit Payments

The consultants who worked on this assignment are pension actuaries. Cavanaugh Macdonald's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate, and the assumptions and methods used meet the guidance provided in the applicable Actuarial Standards of Practice. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

The calculations were completed in compliance with applicable law and the calculations for GASB disclosure, in our opinion, meet the requirements of GASB 67 and GASB 68. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

We respectfully submit the following report and look forward to discussing it with you.

Sincerely,

Brent A. Banister

Brent. A. Banister, PhD, FSA, EA, FCA, MAAA
Chief Actuary

Edward J. Koebel

Edward Koebel, FCA, EA, MAAA
Chief Executive Officer

Virginia Fritz

Virginia Fritz, FSA, EA, FCA, MAAA
Senior Actuary

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Actuarial Certification Letter

This report presents the results of the June 30, 2023 actuarial valuation of the Excise, Gaming and Conservation Officers' Retirement Fund (EG&C). The primary purposes of performing this actuarial valuation are to:

- Determine the employer contribution rate for the calendar year ending December 31, 2025, along with the actuarial surcharge rate for the 2024 calendar year, that will be sufficient to meet the funding policy set out by the Board to comply with Indiana statutes.
- Disclose asset and liability measurements as well as the plan's funded status on the valuation date.
- Compare actual and expected experience of the Fund during the plan year ending June 30, 2023.
- Analyze and report on trends in plan contributions, assets and liabilities over the past several years.

VALUATION RESULTS

The actuarial valuation results provide a "snapshot" view of the plan's financial condition on June 30, 2023. The plan's UAAL decreased from $10.5 million last year to $8.2 million this year and the funded ratio increased from 94% to 96%. The primary factors behind the increase in the funded ratio were contributions above the actuarial rate and an actuarial gain from salary increases less than expected.

A summary of the key results from the June 30, 2023 actuarial valuation compared to the June 30, 2022 valuation is shown in the following table.

Valuation Results	June 30, 2022	June 30, 2023
Unfunded Actuarial Accrued Liability	$ 10,459,493	$ 8,174,444
Funded Ratio (Actuarial Assets)	94.42%	95.80%
Normal Cost	12.97%	13.12%
UAAL Amortization	0.68%	0.19%
Recommended Contribution	13.65%	13.31%
Estimated Member Contributions	(4.00%)	(4.00%)
Actuarially Determined Contribution Rate	9.65%	9.31%
Actuarially Determined Surcharge Rate	1.24%	0.00%
Surcharge Rate Subject to Legal Constraints	1.00%	0.00%
Approved Employer Funding Rate	20.75%	17.90%

Further detail on the valuation results can be found in the following sections of this Board Summary, including discussion regarding the change in the plan's assets, liabilities, and actuarial determined contribution rate between June 30, 2022 and June 30, 2023.

ASSETS

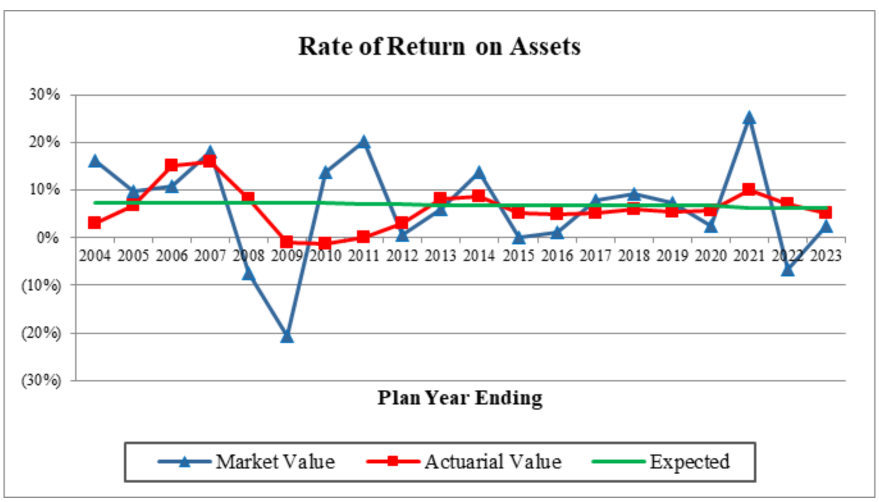
As of June 30, 2023, the plan had net assets of $176.9 million when measured on a market value basis. This was an increase of $4.8 million from the prior year.

The market value of assets is not used directly in the calculation of the unfunded actuarial accrued liability and the actuarially determined contribution rate. An asset valuation method, which smoothes the effect of market fluctuations, is applied to determine the value of assets used in the valuation. The resulting amount is called the actuarial value of assets. In this year's valuation, the actuarial value of assets is $186.7 million, an increase of $9.6 million from the prior year.

The components of change in the asset values are shown in the following table:

		Market Value		Actuarial Value
Net Assets, June 30, 2022	$	172,120,501	$	177,045,047
- Employer and Member Contributions	+	8,879,221	+	8,879,221
- Benefit Payments and Refunds	-	8,383,037	-	8,383,037
- Net Investment Income	+	4,283,279	+	9,111,493
Net Assets, June 30, 2023	$	176,899,964	$	186,652,724
Estimated Rate of Return, Net of Expenses		2.5%		5.1%

The estimated rate of return on the actuarial value of assets was 5.1%, which was lower than the 6.25% investment return assumption applicable for the year ended June 30, 2023. As a result, there was an experience loss on assets of $2.0 million. The FY 2023 return on the market value of assets of 2.5% increased the net deferred investment loss from $4.9 million in last year's valuation to $9.8 million in the current valuation. See Tables 1 through 4 of this report for detailed information on the market and actuarial value of assets.



The rate of return of the actuarial value of assets has been less volatile than the market value return, illustrating the benefits of using an asset smoothing method. The smoothed actuarial value of plan assets has led to relatively steady actuarial valuation results over the last few years, even with a large gain followed by an offsetting loss.

LIABILITIES

The actuarial accrued liability is that portion of the present value of future benefits that is allocated to past service. The remaining portion will be paid by future normal costs. The difference between this liability and the actuarial value of assets as of the valuation date is called the unfunded actuarial accrued liability (UAAL). The dollar amount of unfunded actuarial accrued liability is reduced if the contributions to the plan exceed the normal cost for the year plus interest on the prior year's UAAL.

The unfunded actuarial accrued liability, including expected future COLAs, on both a market value and actuarial value of assets basis is shown as of June 30, 2023 in the following table:

	Market Value	Actuarial Value
Actuarial Accrued Liability	$ 194,827,168	$ 194,827,168
Value of Assets	176,899,964	186,652,724
Unfunded Actuarial Accrued Liability	$ 17,927,204	$ 8,174,444
Funded Ratio	90.80%	95.80%

See Table 5 of this report for the development of the unfunded actuarial accrued liability.

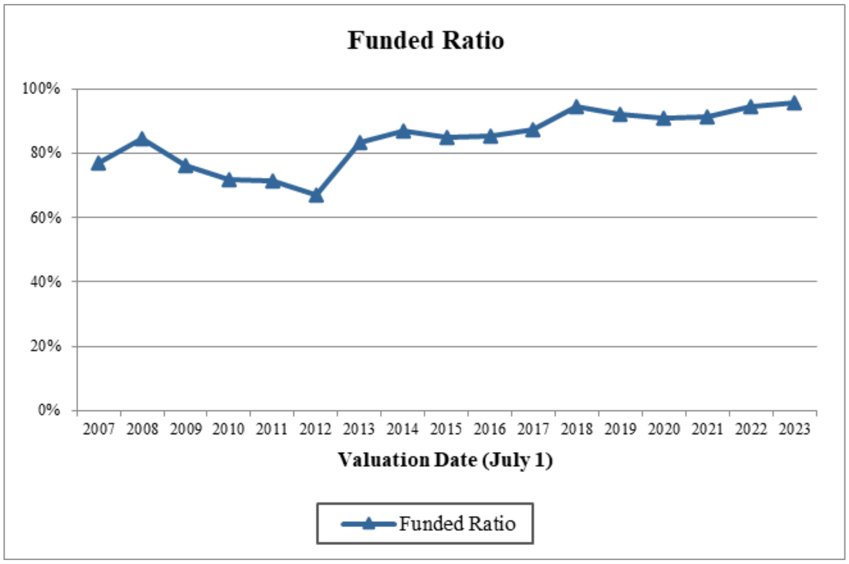
The total plan UAAL (on an actuarial basis) as of June 30, 2023 was $8.2 million, a $2.3 million decrease from the $10.5 million total UAAL last year, driven by approximately $3.7 million of contributions in excess of those actuarially required and an actuarial gain on liabilities of $0.9 million, primarily due to salaries increasing less than expected and a gain on the supplemental benefits, as no benefits were provided for this biennium. These were partially offset by actuarial losses on assets of $2.0 million. The components of the change in the base UAAL are quantified in Table 7 of this report. See Table 8 and Table 9 of this report for a breakdown of the components of experience gains/losses for greater detail on the base plan benefits.

An evaluation of the UAAL on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both large numbers) is reflected. Another way to evaluate the UAAL and the progress made in its funding is to track the funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status information, which is based on the actuarial value of assets, is shown below (in millions).

	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023
Funded Ratio	92.4%	91.1%	91.3%	94.4%	95.8%
UAAL (in millions)	$11.6	$14.6	$15.7	$10.5	$8.2

Note that the funded ratio does not indicate whether or not the plan assets are sufficient to settle benefits earned to date. The funded ratio, by itself, also may not be indicative of future funding requirements. In addition, if the funded ratios were shown using the market value of assets, the results would differ.

As the following graph shows, the EG&C Plan has generally been making progress towards a fully funded level, especially since 2012. The Plan's funded ratio has been gradually trending upward over the past few of years.



ACTUARIALLY DETERMINED CONTRIBUTION RATE

The Plan's actuarially determined contribution rate (ADC) consists of two components:

- A "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date.
- An "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

The UAAL contribution rate is determined by calculating the amortization payment on the UAAL as a level dollar amount over 20 years for each new amortization base. Because the COLA portion of the benefits are funded through the surcharge, the calculation of the UAAL for amortization purposes only considers the base benefit without any COLA. If the Fund's funded ratio exceeds 100% on a combined basis (base benefits plus future assumed COLAs), all prior amortization bases are eliminated and the negative UAAL (or "surplus") is amortized over an open 30-year period, as an offset to other Fund costs.

In addition to the components above that are designed to fund the guaranteed base benefit, the Board is responsible for determining the surcharge to fund future COLAs and/or 13th checks. Because there are five plans that must, by law, provide the same COLA or 13th check each year, the funding strategy needs to consider the funding needs of the entire System as well as the specific fund. The Legislature did not authorize a COLA or 13th check for fiscal years ending 2024 or 2025.

The long-term assumption is that COLAs of 0.4% will be granted starting in 2026, then 0.5% starting in 2034, and finally 0.6% in 2039 and beyond. Considering the biennial budgeting cycle in Indiana, the nearterm goal is to accumulate funds by June 30, 2025 to fund the two COLAs in the following biennium (January 2026 and January 2027). The surcharge rate for calendar year 2023 is 1.00%, and the actuarially determined surcharge rate effective January 1, 2024 is 0.00%. See Table 12 for further details. Note that this surcharge rate, while it will apply to calendar year 2024, is designed to bring the Supplemental Reserve Account to a target level as of June 30, 2025 and may not be reflective of what is needed for long-term funding of the target COLA. In particular, although the surcharge rate is capped at 1.00%, additional funds needed can come from the lottery proceeds that have been historically allocated to the Teachers' Retirement Fund Pre-1996 Account. To provide flexibility to the legislature, the Board adopted surcharge rate of 1.00% applicable for calendar year 2023 was approved to continue at that rate for calendar year 2024.

The total employer rate is the sum of the contributions to fund the base benefits plus the surcharge. The rate set for the base benefits is equal to the greater of the current employer contribution rate or the ADC. Once the plan reaches 95% funded, the employer contribution rate will be decreased by 25% of the difference between the existing rate and the base benefit ADC until the plan reaches 110% funded status. When the plan reaches 110% funded status, the employer contribution rate will be decreased to equal the base benefit ADC. The employer contribution rate will then be increased for the surcharge rate. The Board could decide, however, to set the rates higher in order to provide additional funding for the plan for either the base benefits or for the supplemental benefits as long as they stay at or below the 1.00% cap.

See Table 13 of this report for the detailed development of the contribution rates which are summarized in the following table:

Contribution Rate	June 30, 2022	June 30, 2023
Normal Cost	12.97%	13.12%
UAAL Amortization	0.68%	0.19%
Recommended Contribution	13.65%	13.31%
Estimated Member Contributions	(4.00%)	(4.00%)
Actuarially Determined Contribution Rate	9.65%	9.31%
Actuarially Determined Surcharge Rate	1.24%	0.00%
Surcharge Rate Subject to Legal Constraints	1.00%	0.00%
Approved Employer Funding Rate	20.75%	17.90%

The actuarially determined contribution, determined this year based on the snapshot of the plan taken on the valuation date of June 30, 2023, will change each year as the deferred investment experience is recognized and other experience (both investment and demographic) impacts the plan. The actuarially determined rate for the base plan benefits and the surcharge rate remains well below the Board-approved employer funding rate.

The June 30, 2023 actuarially determined contribution rate decreased to 9.31% for the base benefits and the rate for the supplemental benefits is 0.00%, with the remaining surcharge contributions typically coming from the lottery proceeds. Because the total contribution rate is lower than the current employer funding rate of 20.75% and the plan is over 95% funded, the employer funding rate is moved 25% of the way toward the actuarial rate.

SUMMARY OF PRINCIPAL RESULTS

	June 30, 2021	June 30, 2022	June 30, 2023
MEMBERSHIP			
Active Members	433	406	418
Active Members in DROP	6	5	13
Retired Members and Beneficiaries	249	254	272
Disabled Members	3	3	3
Inactive Members	139	152	155
Total Members	830	820	861
Projected Annual Salaries in Following Year	$ 34,073,424	$ 33,213,764	$ 35,514,227
Annual Retirement Payments for Retired Members, Disabled Members and Beneficiaries	$ 6,979,099	$ 7,332,261	$ 8,010,399
ASSETS AND LIABILITIES			
Net Assets			
Market Value of Assets (MVA)	$ 184,313,811	$ 172,120,501	$ 176,899,964
Actuarial Value of Assets (AVA)	165,179,074	177,045,047	186,652,724
Actuarial Accrued Liability (AAL)	180,847,713	187,504,540	194,827,168
Unfunded Actuarial Accrued Liability (UAAL):			
AAL - AVA	$ 15,668,639	$ 10,459,493	$ 8,174,444
Funded Ratios			
AVA / AAL	91.34%	94.42%	95.80%
MVA / AAL	101.92%	91.80%	90.80%
CONTRIBUTIONS			
Normal Cost Rate	12.91%	12.97%	13.12%
UAAL Rate	1.98%	0.68%	0.19%
Total Recommended Contribution Rate	14.89%	13.65%	13.31%
Expected Employee Contribution Rate	(4.00%)	(4.00%)	(4.00%)
Actuarially Determined Contribution Rate	10.89%	9.65%	9.31%
Actuarially Determined Surcharge Rate (applicable next calendar year)	0.93%	1.24%	0.00%

Note: Liability and funded ratio results include both the base benefits benefit and the supplemental benefits.

This report presents the actuarial valuation results of the Excise, Gaming and Conservation Officers' Retirement Fund as of June 30, 2023. This valuation was prepared at the request of the Indiana Public Retirement System.

Please pay particular attention to our actuarial certification letter, where the guidelines employed in the preparation of this report are outlined. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings which result from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the plan. Sections 4 and 5 describe how the obligations of the plan are to be met under the actuarial cost method in use. Section 6 provides information required by the Governmental Accounting Standards Board (GASB) for reporting and disclosure under GASB 67 and GASB 68.

This report includes several appendices:

- Appendix A Schedules of valuation data classified by various categories of members.
- Appendix B A summary of the current benefit structure, as determined by the provisions of governing law on June 30, 2023.
- Appendix C A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.
- Appendix D A glossary of actuarial terms.

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is June 30, 2023. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the plan, which are generally in excess of assets. The actuarial process then leads to a method of determining the contributions needed by members and the employer in the future to balance the plan assets and liabilities.

Market Value of Assets

The current market value represents the "snapshot" or "cash-out" value of plan assets as of the valuation date. In addition, the market value of assets provides a basis for measuring investment performance from time to time.

Table 1 summarizes the changes in the market value of assets for the last two years for the base benefits, whereas Table 2 shows the changes for the supplemental benefit reserve account. Table 15 (in the GASB section) provides detail regarding the allocation of investments in the trust.

Actuarial Value of Assets

The market value of assets, representing a "cash-out" value of plan assets, may not be the best measure of the plan's ongoing ability to meet its obligations. To arrive at a suitable value of assets for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. Under the asset smoothing methodology, the difference between the actual and assumed investment return on the market value of assets is recognized evenly over a five-year period.

Table 3 shows the development of the actuarial value of assets (AVA) as of the valuation date for the base benefits and Table 4 shows the information for the supplemental benefit.

TABLE 1

DEVELOPMENT OF MARKET VALUE OF ASSETS
(Base Benefits)

	June 30, 2022	June 30, 2023
1. Market Value of Assets, Beginning of Year	$ 183,401,875	$ 171,041,206
2. Receipts		
a. Member (Includes Purchased Service) [1]	$ 1,352,214	$ 1,497,124
b. Employer	6,424,196	6,841,378
c. Member Reassignment Transfers	0	205,121
d. Miscellaneous	0	0
e. Total	$ 7,776,410	$ 8,543,623
3. Expenditures		
a. Benefit Payments	$ 7,732,906	$ 8,234,960
b. Refund of Contributions	175,979	71,691
c. Member Reassignments	0	0
d. Administrative Expense	102,484	118,926
e. Miscellaneous	0	0
f. Total	$ 8,011,369	$ 8,425,577
4. Investment Return		
a. Investment Income	$ (12,131,703)	$ 4,354,107
b. Securities Lending Income	5,993	11,911
c. Total Investment Return	$ (12,125,710)	$ 4,366,018
5. Market Value of Assets, End of Year: (1) + (2e) - (3f) + (4c)	$ 171,041,206	$ 175,525,270
6. Estimated Rate of Return, Net of Expenses [2]	(6.67%)	2.48%

[1] Includes $11,624 of member service purchases during fiscal year 2022 and $115,207 of member service purchases during fiscal year 2023.

[2] Based on individual fund experience. Assumes cash flows occur at mid-year.

TABLE 2

DEVELOPMENT OF MARKET VALUE OF ASSETS
(Supplemental Benefits)

		June 30, 2022		June 30, 2023
1. Market Value of Assets, Beginning of Year	$	911,936	$	1,079,295
2. Receipts				
a. Employer Surcharge	$	289,739	$	335,598
b. Lottery Allocation		0		0
c. Non-Employer Entity Contributions		0		0
d. Miscellaneous		0		0
e. Total	$	289,739	$	335,598
3. Expenditures				
a. Benefit Payments	$	38,528	$	76,386
b. Administrative Expense		0		0
c. Miscellaneous Expenditures		0		0
d. Total	$	38,528	$	76,386
4. Investment Return				
a. Investment Income	$	(83,888)	$	36,097
b. Securities Lending Income		36		90
c. Total Investment Return	$	(83,852)	$	36,187
5. Market Value of Assets, End of Year: (1) + (2e) - (3d) + (4c)	$	1,079,295	$	1,374,694
6. Rate of Return on Market Value of Assets, Net of Expenses [1]		(8.08%)		2.99%

[1] Based on individual fund experience. Assumes cash flows occur at mid-year.

TABLE 3

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
(Base Benefits)

					For the Year Ending June 30, 2023
1. Market Value as of June 30, 2022				$	171,041,206
2. Receipts				$	8,543,623
3. Expenditures, Net of Administrative Expenses				$	(8,306,651)
4. Expected Return on Assets [1]				$	10,697,481
5. Expected Market Value as of June 30, 2023: (1) + (2) + (3) + (4)				$	181,975,659
6. Actual Market Value as of June 30, 2023				$	175,525,270
7. Year End 2023 Asset Gain/(Loss): (6) - (5)				$	(6,450,389)
8. Deferred Investment Gains and Losses					
Year Ended June 30:		Gain/(Loss)	Factor		Deferred Amount
a. 2020	$	(6,034,630)	20%	$	(1,206,926)
b. 2021		27,285,333	40%		10,914,133
c. 2022		(23,686,671)	60%		(14,212,003)
d. 2023		(6,450,389)	80%		(5,160,311)
e. Total				$	(9,665,107)
9. Initial Actuarial Value as of June 30, 2023: (6) - (8e)				$	185,190,377
10. Constraining Values					
a. 80% of Market Value: (6) x 0.8				$	140,420,216
b. 120% of Market Value: (6) x 1.2				$	210,630,324
11. Actuarial Value as of June 30, 2023				$	185,190,377
12. Actuarial Rate of Return, Net of Expenses [2]					5.15%
13. Actuarial Value of Assets as a Percent of Market Value: (11) / (6)					105.5%
14. Actuarial Value of Assets					
a. Base Benefits				$	185,190,377
b. Supplemental Benefits				$	1,462,347
c. Total				$	186,652,724

[1] Assumes cash flows occur at mid-year and a discount rate of 6.25%.
[2] Assumes cash flows occur at mid-year.

TABLE 4

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
(Supplemental Benefits)

		For Plan Year Ending June 30, 2023
1. Market Value, as of June 30, 2022	$	1,079,295
2. Receipts	$	335,598
3. Expenditures, Net of Administrative Expenses	$	(76,386)
4. Expected Return on Assets [1]	$	75,556
5. Expected Market Value as of June 30, 2023: (1) + (2) + (3) + (4)	$	1,414,063
6. Actual Market Value as of June 30, 2023	$	1,374,694
7. Year end 2023 asset gain/(loss): (6) - (5)	$	(39,369)

8. Deferred Investment Gains and Losses

	Year Ended June 30:		Gain/(Loss)	Factor		Deferred Amount
a.	2020	$	(10,176)	20%	$	(2,035)
b.	2021		87,739	40%		35,096
c.	2022		(148,698)	60%		(89,219)
d.	2023		(39,369)	80%		(31,495)
e.	Total				$	(87,653)

9. Initial Actuarial Value as of June 30, 2023: (6) - (8e)	$	1,462,347
10. Constraining Values		
a. 80% of Market Value: (6) x 0.8	$	1,099,755
b. 120% of Market Value: (6) x 1.2	$	1,649,633
11. Actuarial Value as of June 30, 2023	$	1,462,347
12. Actuarial Rate of Return, Net of Expenses [2]		4.20%
13. Actuarial Value of Assets as a Percent of Market Value: (11) / (6)		106.4%

[1] Assumes cash flows occur at mid-year and a return assumption of 6.25%.
[2] Assumes cash flows occur at mid-year.

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the Excise, Gaming and Conservation Officers' Retirement Fund as of the valuation date, June 30, 2023. In this section, the discussion will focus on the commitments (future benefit payments) of the plan, which are referred to as its liabilities.

The liability calculations for the June 30, 2023 Excise, Gaming and Conservation Officers' Retirement Fund valuation are based on census data collected as of June 30, 2022. Standard actuarial techniques are used to adjust these results from June 30, 2022 to June 30, 2023. While these roll-forward techniques are based on all actuarial assumptions being met during the intervening year, there will, of course, be many of the assumptions that will not be met exactly. In general, this does not materially affect the resulting calculations or conclusions in this report. Should there be a year in which events, such as plan changes, occur that would affect the results, adjustments in the roll-forward methods would be made to appropriately reflect the events.

All liabilities reflect the benefit provisions and actuarial assumptions in place as of June 30, 2023.

Actuarial Accrued Liability

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

(1) that which is attributable to the past and

(2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability." The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost."

Table 5 contains the calculation of actuarial accrued liability for the Plan under the Entry Age Normal actuarial cost. This amount is split between the base benefit and the supplemental plan. Granted supplemental benefits are the present value of legislated benefits, whereas future supplemental benefits represent those assumed to occur based on the Plan's COLA assumption.

Low-Default-Risk Obligation Measure

Under the revised Actuarial Standards of Practice (ASOP) No. 4 effective for valuations after February 15, 2023, we are required to include a low-default-risk obligation measure of the System's liability in our funding valuation report. This is an informational disclosure as described below and would not be appropriate for assessing the funding progress or health of the plan. This measure uses the unit credit cost method and reflects all the assumptions and provisions of the funding valuation (including the assumed COLA paid from the SRA), except that the discount rate is derived from considering low-default-risk fixed income securities. We considered the FTSE Pension Discount Curve based on market bond rates published by the Society of Actuaries as of June 30, 2023 and with the 30-year spot rate used for all durations beyond

30 because this provides an appropriate set of discount rates for this intended purpose. Using these assumptions, we calculate a liability of approximately $211,840,000. This amount approximates the termination liability if the plan (or all covered employment) ended on the valuation date and all of the accrued benefits had to be paid with cash-flow matched bonds. If the plan were funded with the intent of being able to be terminated at any valuation date, contribution requirements may need to increase and would also be more volatile. This assurance of funded status and benefit security is typically more relevant for corporate plans than for governmental plans since governments rarely have the need or option to completely terminate a plan. However, this informational disclosure is required for all plans whether corporate or governmental and care should be taken to ensure the one size fits all metric is not misconstrued.

TABLE 5

ACTUARIAL ACCRUED LIABILITY
(Base and Supplemental Benefits)

As of June 30, 2023	Base Benefits		Supplemental Benefits *Granted*		Supplemental Benefits *Future*		Total	
1. Actuarial Accrued Liability								
a. Member Contribution Balances	$	15,292,316	$	0	$	0	$	15,292,316
b. Active & Inactive Members		88,081,152		0		5,583,517		93,664,669
c. In-pay Members		82,358,823		797,661		2,713,699		85,870,183
d. Total	$	185,732,291	$	797,661	$	8,297,216	$	194,827,168
2. Actuarial Value of Assets	$	185,190,377	$	797,661	$	664,686	$	186,652,724
3. Unfunded Actuarial Accrued Liability: (1d) - (2)	$	541,914	$	0	$	7,632,530	$	8,174,444
4. Funded Ratio: (2) / (1d)		99.7%		100.0%		8.0%		95.8%

TABLE 6

COMBINED BASE AND SUPPLEMENTAL PLANS: SOLVENCY TEST

(Base and Supplemental Benefits)

	Actuarial Accrued Liabilities (AAL)					Portion of AAL Covered by Assets			
Actuarial Valuation as of June 30	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2023	$15,292	$85,870	$93,665	$194,827	$186,653	100.0%	100.0%	91.3%	95.8%
2022	14,100	79,628	93,777	187,505	177,045	100.0	100.0	88.8	94.4
2021	13,729	74,412	92,707	180,848	165,179	100.0	100.0	83.1	91.3
2020	12,927	70,363	80,688	163,978	149,359	100.0	100.0	81.9	91.1
2019	11,661	68,652	71,894	152,207	140,559	100.0	100.0	83.8	92.3
2018	10,715	68,750	60,591	140,056	132,441	100.0	100.0	87.4	94.6
2017	9,737	69,217	63,649	142,603	124,531	100.0	100.0	71.6	87.3
2016	9,085	67,424	62,456	138,965	118,515	100.0	100.0	67.3	85.3
2015	8,456	61,503	62,837	132,796	112,765	100.0	100.0	68.1	84.9
2014	8,042	54,626	60,933	123,601	107,563	100.0	100.0	73.7	87.0

Note: Dollar amounts are in thousands of dollars.

TABLE 7

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
(Base and Supplemental Benefits)

For Plan Year Ending June 30, 2023

	Base	Base and Supplemental
1. Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2022	$ 2,514,192	$ 10,459,493
2. Normal Cost	4,307,825	4,537,000
3. Actuarially Determined Contribution	(4,533,253)	(4,855,427)
4. Interest	143,048	633,817
5. Expected Unfunded Actuarial Accrued Liability as of June 30, 2023	$ 2,431,812	$ 10,774,883
6. Actuarial Value of Asset Changes		
a. Investment Experience (Gain)/Loss	$ 1,943,064	$ 1,969,328
b. Contributions (Above)/Below the Actuarially Determined Contribution and Other (Gain)/Loss	$ (3,663,692)	$ (3,667,467)
7. Actuarial Accrued Liability Changes		
a. Actuarial Accrued Liability Experience (Gain)/Loss	$ (169,270)	$ (902,300)
b. Additional Liability Due to Benefit Changes	0	0
c. Additional Liability Due to Assumption Changes	0	0
8. Total Experience (Gain)/Loss	$ (1,889,898)	$ (2,600,439)
9. Unfunded Actuarial Accrued Liability as of June 30, 2023: (5) + (8)	$ 541,914	$ 8,174,444

TABLE 8

ACTUARIAL GAIN/(LOSS)
(Base and Supplemental Benefits)

Liabilities		Base		Base and Supplemental
1. Actuarial Accrued Liability as of June 30, 2022	$	178,409,781	$	187,504,540
2. Normal Cost for Plan Year Ending June 30, 2023		4,307,825		4,537,000
3. Benefit Payments During Plan Year[1]		(8,306,651)		(8,383,037)
4. Service Purchases (employee and employer)		115,207		115,207
5. Member Reassignment Transfers		205,121		205,121
6. Interest at 6.25%		11,170,278		11,750,637
7. Change Due to Benefit Changes		0		0
8. Change Due to Assumption Changes		0		0
9. Expected Actuarial Accrued Liability as of June 30, 2023	$	185,901,561	$	195,729,468
10. Actuarial Accrued Liability as of June 30, 2023	$	185,732,291	$	194,827,168
Assets				
11. Actuarial Value of Assets as of June 30, 2022	$	175,895,589	$	177,045,047
12. Receipts During Plan Year		8,543,623		8,879,221
13. Expenditures, Excluding Expenses, During Plan Year		(8,306,651)		(8,383,037)
14. Interest at 6.25%		11,000,880		11,080,821
15. Expected Actuarial Value of Assets as of June 30, 2023	$	187,133,441	$	188,622,052
16. Actuarial Value of Assets as of June 30, 2023	$	185,190,377	$	186,652,724
Experience Gain / (Loss)				
17. Liability Actuarial Experience Gain/(Loss): (9) - (8)	$	169,270	$	902,300
18. Asset Actuarial Experience Gain/(Loss): (16) - (15)		(1,943,064)		(1,969,328)
19. Total Actuarial Experience Gain/(Loss): (17) + (18)	$	(1,773,794)	$	(1,067,028)

[1] Does not include miscellaneous expenses or benefit overpayments.

TABLE 9

EXPERIENCE GAIN/(LOSS) ANALYSIS BY SOURCE
(Base Benefits)

Liability Sources (in thousands)		**Gain/(Loss)***
Retirement	$	(255)
Termination		63
Disability		248
Mortality		(536)
Salary		951
New Entrants/Rehires		(366)
Miscellaneous/COLA		64
Total Liability Experience Gain/(Loss)	$	169
as a % of AAL		0.1%
Asset Experience Gain/(Loss)	$	(1,943)
Total Actuarial Experience Gain/(Loss)	$	(1,774)

*Numbers may not add due to rounding.

TABLE 10

PROJECTED BENEFIT PAYMENTS
(Base and Supplemental Benefits)

Plan Year Ending June 30	Benefit Amount
2024	$ 9,175,536
2025	10,266,310
2026	10,583,673
2027	10,597,836
2028	11,124,141
2029	11,483,496
2030	11,786,300
2031	12,533,664
2032	13,376,727
2033	13,643,077
2034	14,535,948
2035	15,509,953
2036	16,427,407
2037	16,852,863
2038	17,544,891
2039	18,027,313
2040	18,298,788
2041	18,578,424
2042	19,042,175
2043	19,252,240
2044	19,434,090
2045	19,653,412
2046	19,816,573
2047	19,782,752
2048	19,725,910
2049	19,698,399
2050	19,576,702
2051	19,445,025
2052	19,214,739
2053	18,912,168

Note: Payouts reflect nominal payouts for current members, assuming that all future assumptions are met.

The previous two sections were devoted to a discussion of the assets and liabilities of the plan. We now turn to considering how the benefits will be funded. The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost rate and (2) the unfunded actuarial accrued liability contribution rate.

The term "fully funded" is often applied to a plan in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, plans are not fully funded, either because of past benefit improvements that have not been completely funded, contribution levels, or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated by the actuarial assumptions. Under these circumstances, an unfunded actuarial accrued liability (UAAL) exists. Likewise, when the actuarial value of assets is greater than the actuarial accrued liability, a surplus exists.

Description of Contribution Rate Components

The Entry Age Normal (EAN) actuarial cost method is used for the valuation. Under that method, the normal cost for each year from entry age to assumed exit age is a constant percentage of the member's year by year projected compensation. The portion of the present value of future benefits not provided by the present value of future normal costs is the actuarial accrued liability. The unfunded actuarial accrued liability/(surplus) represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. For EG&C purposes, this calculation excludes consideration of future COLAs. The unfunded actuarial accrued liability is calculated each year and reflects experience gains and losses. New amortization bases are funded over 20 years using a level dollar payment approach.

Funding for future COLAs is provided by using a surcharge. This rate is intended to fund the COLAs anticipated to be granted in the next biennium by the start of that biennium.

The contribution rate based on the June 30, 2023 actuarial will be used to calculate the actuarially determined employer contribution rate to the Excise, Gaming and Conservation Officers' Retirement Fund for the 2025 calendar year. The supplemental benefit surcharge rate will be used to calculate the actuarially determined employer contribution rate for the 2024 calendar year. In general, contributions are computed in accordance with a stable percent-of-payroll funding objective.

The methodology of developing the contribution rate is designed to fund the benefits over a reasonable period with a stable contribution pattern. The current UAAL for the base benefits will be funded over the next 20 years, although the funding policy is likely to result in this being accomplished sooner. The COLA benefits are not intended to be funded beyond those granted in the past and those expected to be granted in the next biennium. Because benefits cannot be granted if they are not funded, this approach is expected to adequately fund benefits. While not how benefits are actually funded, the contribution rate shown in Table 14 under the current assumptions reflects a rate that could fund both the base benefits and COLAs in a reasonable manner.

Contribution Rate Summary

In Table 11 the amortization payment related to the unfunded actuarial accrued liability/(surplus), as of June 30, 2023, is developed. The surcharge needed to fund the assumed COLAs is developed in Table 12. Table 13 develops the actuarially determined contribution rate for the Plan. The contribution rates shown in this report are based on the actuarial assumptions and cost methods described in Appendix C. Additionally, in Table 14 the contribution amounts under alternative discount rates are provided to illustrate the sensitivity of the contribution requirements relative to the selection of the investment return assumption.

TABLE 11

SCHEDULE OF AMORTIZATION BASES
(Base Benefits)

Amortization Bases	Original Amount [1]	June 30, 2023 Remaining Payments	Date of Last Payment	Outstanding Balance as of June 30, 2023	Annual Contribution
2009 UAAL Base	12,159,924	14	7/1/2037	8,652,901	889,775
2010 UAAL Base	3,839,282	17	7/1/2040	2,987,910	273,252
2011 UAAL Base	1,009,127	18	7/1/2041	809,810	71,719
2012 UAAL Base	5,037,093	19	7/1/2042	4,156,640	357,492
2013 UAAL Base	(1,646,934)	20	7/1/2043	(1,394,119)	(116,728)
2014 UAAL Base	(3,141,667)	21	7/1/2044	(2,722,073)	(222,378)
2015 UAAL Base	4,288,938	22	7/1/2045	3,796,292	303,202
2016 UAAL Base	782,014	13	7/1/2036	611,613	65,977
2017 UAAL Base	(1,969,636)	14	7/1/2037	(1,613,413)	(165,907)
2018 UAAL Base	(15,408,361)	15	7/1/2038	(13,156,500)	(1,295,853)
2019 UAAL Base	3,147,264	16	7/1/2039	2,789,676	264,285
2020 UAAL Base	2,836,128	17	7/1/2040	2,600,335	237,807
2021 UAAL Base	129,618	18	7/1/2041	122,543	10,853
2022 UAAL Base	(5,351,413)	19	7/1/2042	(5,209,803)	(448,070)
2023 UAAL Base	(1,889,898)	20	7/1/2043	(1,889,898)	(158,240)
Total				$ 541,914	$ 67,186

1. Total UAAL Amortization Payments	$ 67,186
2. Projected Payroll for FY 2024	$ 35,514,227
3. UAAL Amortization Payment Rate	0.19%

[1] The original amounts from 2013 to 2017 were provided by the prior actuary. Amounts prior to 2013 were estimated by INPRS.

TABLE 12

DEVELOPMENT OF SURCHARGE RATE
(Supplemental Benefits)

Projected COLAs in Next Biennium Beginning July 1, 2025

First Anticipated COLA		
1. Date of COLA commencement		January 1, 2026
2. Rate of COLA		0.4%
3. Value as of July 1, 2025 of COLA	$	388,979
Second Anticipated COLA		
4. Date of COLA commencement		January 1, 2027
5. Rate of COLA		0.4%
6. Value as of July 1, 2025 of COLA		376,555
7. Total COLA Funding Requirement as of July 1, 2025: (3) + (6)	$	765,534

Funding Sources for Projected COLAs

8. Assets as of June 30, 2023 Available for Future COLAs	$	664,686
9. Projected Contributions from 7/1/2023 to 12/31/2023		166,917
10. Expected Earnings through July 1, 2025		104,428
11. Projected Available Assets at July 1, 2025	$	936,031
12. Required Additional Funding for Anticipated COLAs: (7) - (11)		0

Surcharge Rate

13. Projected Payroll from 1/1/2024 to 6/30/2024		17,757,114
14. Projected Payroll from 7/1/2024 to 6/30/2025		36,455,354
15. Value of (13) and (14) as of July 1, 2025	$	56,756,313
16. Surcharge Rate: (12) /(15)		0.00%

TABLE 13

ACTUARIALLY DETERMINED CONTRIBUTION RATE
(Base and Supplemental Benefits)

	Base Benefits	Supplemental Benefits	Total
1. Projected Payroll for FY 2024	$ 35,514,227		
2. Normal Cost Rate	13.12%	0.70%	13.82%
3. Amortization of UAAL as of June 30, 2023			
a. Dollar Amount	$ 67,186		
b. Percent of Projected Pay	0.19%		
4. Expected Employee Contribution Rate	(4.00%)		
5. Preliminary Actuarially Determined Contribution (ADC) Rate: (2) + (3b) + (4)	9.31%		
6. Supplemental Benefit Surcharge Rate		0.00%	
7. ADC Rate Subject to Legal Constraints	9.31%	0.00%	
8. Actuarially Determined Contribution Rate for FY 2024:			
a. July 1, 2023 - December 31, 2023	10.89%	1.24%	12.13%
b. January 1, 2024 - June 30, 2024	9.65%	0.00%	9.65%
c. Average	10.27%	0.62%	10.89%
9. Approved Board Policy Contribution Rate	17.28%	0.62%	17.90%
10. Expected Percentage of ADC Contributed: (9) / (8c)			164.37%

TABLE 14

INVESTMENT RETURN SENSITIVITY
(Base and Supplemental Benefits)

	1.00% Decrease: (5.25%)	0.75% Decrease: (5.50%)	0.50% Decrease: (5.75%)	0.25% Decrease: (6.00%)	Current Assumption: (6.25%)
Funded Status					
Actuarial Accrued Liability	$220,968,110	$213,936,564	$207,249,634	$200,886,333	$194,827,168
Actuarial Value of Assets	186,652,724	186,652,724	186,652,724	186,652,724	186,652,724
Unfunded Actuarial Accrued Liability	$34,315,386	$27,283,840	$20,596,910	$14,233,609	$8,174,444
Funded Ratio	84.5%	87.2%	90.1%	92.9%	95.8%
Actuarially Determined Contribution Amount					
Normal Cost	$6,255,436	$5,881,140	$5,533,144	$5,209,408	$4,908,066
UAAL Amortization	2,694,239	2,186,246	1,685,850	1,192,645	706,252
Member Contributions	(1,420,569)	(1,420,569)	(1,420,569)	(1,420,569)	(1,420,569)
Actuarially Determined Contribution Amount	$7,529,106	$6,646,817	$5,798,425	$4,981,484	$4,193,749
Actuarially Determined Contribution Rate	21.20%	18.72%	16.33%	14.03%	11.81%

	0.25% Increase: (6.50%)	0.50% Increase: (6.75%)	0.75% Increase: (7.00%)	1.00% Increase: (7.25%)	1.25% Increase: (7.50%)
Funded Status					
Actuarial Accrued Liability	$189,054,012	$183,550,000	$178,299,433	$173,287,685	$168,501,116
Actuarial Value of Assets	186,652,724	186,652,724	186,652,724	186,652,724	186,652,724
Unfunded Actuarial Accrued Liability	$2,401,288	($3,102,724)	($8,353,291)	($13,365,039)	($18,151,608)
Funded Ratio	98.7%	101.7%	104.7%	107.7%	110.8%
Actuarially Determined Contribution Amount					
Normal Cost	$4,627,405	$4,365,857	$4,121,983	$3,894,465	$3,682,088
UAAL Amortization	226,317	(228,373)	(629,123)	(1,029,571)	(1,429,692)
Member Contributions	(1,420,569)	(1,420,569)	(1,420,569)	(1,420,569)	(1,420,569)
Actuarially Determined Contribution Amount	$3,433,152	$2,716,915	$2,072,291	$1,444,324	$831,827
Actuarially Determined Contribution Rate	9.67%	7.65%	5.84%	4.07%	2.34%

Note: Comparisons are based on funding the COLA in the same method as the base benefit, rather than with a surcharge. Consequently, these results are for comparative purposes only and will not match the actual results under the funding policy.

GASB NO. 67 AND GASB NO. 68

The Governmental Accounting Standards Board issued Statement No. 67 (GASB 67), "Financial Reporting for Pension Plans" and Statement No. 68 (GASB 68), "Accounting and Financial Reporting for Pensions" in June 2012. The effective date for reporting under GASB 67 for the INPRS Plans was the fiscal year ending June 30, 2014. GASB 68's effective date for employers is the first fiscal year beginning after June 15, 2014.

The sections that follow provide the results of the required actuarial calculations set out in GASB 67 and GASB 68 for note disclosure and Required Supplementary Information (RSI). Some of this information was provided by the INPRS for use in this report.

The discount rate used for these disclosures is the assumed return on assets of 6.25%. We have verified that the current assets in conjunction with future contributions made on behalf of current members (including all contributions to fund any past service liability) will be sufficient to make the anticipated benefit payments to be provided to the current members.

To the best of our knowledge, the information contained in this report is complete and accurate. The calculations were performed by qualified actuaries according to generally accepted actuarial principles and practices, as well as in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board. The calculations are based on the current provisions of the plan, and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of the plan. In addition, the calculations were completed in compliance with applicable law and, in our opinion, meet the requirements of GASB 67 and GASB 68.

TABLE 15

STATEMENT OF FIDUCIARY NET POSITION

			June 30, 2023
1. Assets			
a. Cash		$	0
b. Receivables			
i.	Contributions and Miscellaneous Receivables	$	0
ii.	Investments Receivable		1,455,464
iii.	Foreign Exchange Contracts Receivable		30,841,334
iv.	Interest and Dividends		463,073
v.	Receivables Due From Other Funds		0
vi.	Total Receivables	$	32,759,871
c. Investments			
i.	Short-Term Investments	$	0
ii.	Pooled Repurchase Agreements		80,478
iii.	Pooled Short-Term Investments		15,937,428
iv.	Pooled Fixed Income		48,627,251
v.	Pooled Equity		24,699,323
vi.	Pooled Alternative Investments		93,169,513
vii.	Pooled Derivatives		(58,824)
viii.	Pooled Investments		0
ix.	Securities Lending Collateral		708,955
x.	Total Investments	$	183,164,124
d. Net Capital Assets			0
e. Other Assets			0
f. Total Assets: a + b(vi) + c(x) + d + e		$	215,923,995
2. Liabilities			
a. Administrative Payable		$	11,388
b. Retirement Benefits Payable			88,519
c. Investments Payable			6,178,792
d. Foreign Exchange Contracts Payable			30,948,688
e. Securities Lending Obligations			708,955
f. Securities Sold Under Agreement to Repurchase			1,075,994
g. Due To Other Funds			11,695
h. Due to Other Governments			0
i. Total Liabilities: a + b + c + d + e + f + g + h		$	39,024,031
3. Fiduciary Net Position Restricted for Pensions: (1)(f) - (2)(i)		**$**	**176,899,964**

TABLE 16

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

			For Fiscal Year Ending June 30, 2023
1. Fiduciary Net Position as of June 30, 2022		**$**	**172,120,501**
2. Additions			
a. Contributions			
i.	Member Contributions	$	1,381,917
ii.	Employer Contributions		7,176,976
iii.	Service Purchases (Employer and Member) [1]		115,207
iv.	Non-Employer Contributing Entity Contributions		0
v.	Total Contributions	$	8,674,100
b. Investment Income/(Loss)			
i.	Net Appreciation/(Depreciation)	$	3,079,642
ii.	Net Interest and Dividend Income		2,291,804
iii.	Securities Lending Income		13,363
iv.	Other Net Investment Income		5,354
v.	Investment Management Expenses		(955,529)
vi.	Direct Investment Expenses		(31,067)
vii.	Securities Lending Expenses		(1,362)
viii.	Total Investment Income/(Loss)	$	4,402,205
c. Other Additions			
i.	Member Reassignments		207,395
ii.	Miscellaneous Receipts		0
iii.	Total Other Additions	$	207,395
d. Total Revenue (Additions): a(v) + b(viii) + c(iii)		$	13,283,700
3. Deductions			
a. Pension, Survivor and Disability Benefits		$	8,311,346
b. Death and Funeral Benefits			0
c. Distributions of Contributions and Interest			71,691
d. Administrative Expenses			118,926
e. Member Reassignments			2,274
f. Miscellaneous Expenses			0
g. Total Expenses (Deductions)		$	8,504,237
4. Net Increase (Decrease) in Fiduciary Net Position: (2)(d) - (3)(g)		**$**	**4,779,463**
5. Fiduciary Net Position as of June 30, 2023: (1) + (4)		**$**	**176,899,964**

[1] Service purchases paid by employer of $0 and employee of $115,207.

TABLE 17

SCHEDULE OF CHANGES IN NET PENSION LIABILITY

	For Fiscal Year Ending June 30, 2023		
	Total Pension Liability (a)	**Plan Fiduciary Net Position (b)**	**Net Pension Liability (a) – (b)**
1. Balance at June 30, 2022	$ 187,504,540	$ 172,120,501	$ 15,384,039
2. Changes for the Year:			
Service Cost (SC) [1]	4,537,000		4,537,000
Interest Cost	11,750,637		11,750,637
Experience (Gains)/Losses	(902,300)		(902,300)
Assumption Changes	0		0
Plan Amendments	0		0
Benefit Payments [2]	(8,383,037)	(8,383,037)	0
Service Purchases			
Employer Contributions	0	0	0
Employee Contributions	115,207	115,207	0
Member Reassignments [3]	205,121	205,121	0
Employer Contributions		7,176,976	(7,176,976)
Non-employer Contributions		0	0
Employee Contributions		1,381,917	(1,381,917)
Net Investment Income		4,402,205	(4,402,205)
Administrative Expenses		(118,926)	118,926
Other		0	0
Net Changes	$ 7,322,628	$ 4,779,463	$ 2,543,165
3. Balance at June 30, 2023	$ 194,827,168	$ 176,899,964	$ 17,927,204

[1] Service cost provided as of beginning of year. Interest to end of year is included in the interest cost.

[2] Includes refund of member contributions of $71,691.

[3] Includes net interfund transfers of employer contributed amounts.

TABLE 18

DEFERRED OUTFLOWS OF RESOURCES

		June 30, 2022	Remaining Period		Recognition		June 30, 2023
1. Liability Experience							
June 30, 2023 Loss	$	0	5.32	$	0	$	0
June 30, 2022 Loss		0	4.34		0		0
June 30, 2021 Loss		0	3.78		0		0
June 30, 2020 Loss		2,911,718	2.80		1,039,901		1,871,817
June 30, 2019 Loss		1,979,277	1.78		1,111,955		867,322
June 30, 2018 Loss		0	0.95		0		0
June 30, 2017 Loss		4,972	0.26		4,972		0
June 30, 2016 Loss		0	0.00		0		0
June 30, 2015 Loss		0	0.00		0		0
June 30, 2014 Loss		0	0.00		0		0
2. Assumption Changes							
June 30, 2023 Loss	$	0	5.32	$	0	$	0
June 30, 2022 Loss		0	4.34		0		0
June 30, 2021 Loss		6,803,466	3.78		1,799,860		5,003,606
June 30, 2020 Loss		0	2.80		0		0
June 30, 2019 Loss		0	1.78		0		0
June 30, 2018 Loss		0	0.95		0		0
June 30, 2017 Loss		0	0.26		0		0
June 30, 2016 Loss		0	0.00		0		0
June 30, 2015 Loss		0	0.00		0		0
3. Investment Experience							
June 30, 2023 Loss	$	6,367,116	5.00	$	1,273,424	$	5,093,692
June 30, 2022 Loss		18,983,746	4.00		4,745,937		14,237,809
June 30, 2021 Loss		0	3.00		0		0
June 30, 2020 Loss		2,373,878	2.00		1,186,940		1,186,938
June 30, 2019 Loss		0	1.00		0		0
Total Outflows: (1)+(2)+(3)	**$**	**39,424,173**		**$**	**11,162,989**	**$**	**28,261,184**

Results prior to 2018 were produced by the prior actuary.

In accordance with GASB, the original amortization period for liability experience and assumption changes are amortized over the expected future working lifetime of all members, whereas the investment experience is amortized over five years.

TABLE 19

DEFERRED INFLOWS OF RESOURCES

		June 30, 2022	Remaining Period		Recognition		June 30, 2023
1. Liability Experience							
June 30, 2023 Gain	$	902,300	5.32	$	169,606	$	732,694
June 30, 2022 Gain		1,162,655	4.34		267,894		894,761
June 30, 2021 Gain		718,673	3.78		190,126		528,547
June 30, 2020 Gain		0	2.80		0		0
June 30, 2019 Gain		0	1.78		0		0
June 30, 2018 Gain		93,694	0.95		93,694		0
June 30, 2017 Gain		0	0.26		0		0
June 30, 2016 Gain		0	0.00		0		0
June 30, 2015 Gain		0	0.00		0		0
June 30, 2014 Gain		0	0.00		0		0
2. Assumption Changes							
June 30, 2023 Gain	$	0	5.32	$	0	$	0
June 30, 2022 Gain		0	4.34		0		0
June 30, 2021 Gain		0	3.78		0		0
June 30, 2020 Gain		957,959	2.80		342,129		615,830
June 30, 2019 Gain		0	1.78		0		0
June 30, 2018 Gain		1,279,776	0.95		1,279,776		0
June 30, 2017 Gain		107,088	0.26		107,088		0
June 30, 2016 Gain		0	0.00		0		0
June 30, 2015 Gain		0	0.00		0		0
3. Investment Experience							
June 30, 2023 Gain	$	0	5.00	$	0	$	0
June 30, 2022 Gain		0	4.00		0		0
June 30, 2021 Gain		16,482,480	3.00		5,494,161		10,988,319
June 30, 2020 Gain		0	2.00		0		0
June 30, 2019 Gain		160,983	1.00		160,983		0
Total Inflows: (1)+(2)+(3)	**$**	**21,865,608**		**$**	**8,105,457**	**$**	**13,760,151**

Results prior to 2018 were produced by the prior actuary.

In accordance with GASB, the original amortization period for liability experience and assumption changes are amortized over the expected future working lifetime of all members, whereas the investment experience is amortized over five years.

TABLE 20

DEFERRED INFLOWS / OUTFLOWS TO BE RECOGNIZED IN PENSION EXPENSE

Fiscal Year Ending June 30	Deferred Outflows	Deferred Inflows	Net Deferred Outflows/(Inflows)
Current Year:			
2023	$ 11,162,989	$ 8,105,457	$ 3,057,532
Future Years:			
2024	$ 10,913,382	$ 6,463,916	$ 4,449,466
2025	8,651,137	6,395,485	2,255,652
2026	7,423,245	585,795	6,837,450
2027	1,273,420	260,685	1,012,735
2028	0	54,270	(54,270)
Thereafter	0	0	0

TABLE 21

PENSION EXPENSE UNDER GASB NO. 68

		For Fiscal Year Ending June 30, 2023
1. Service Cost, beginning of year		$ 4,537,000
2. Interest Cost, including interest on service cost		11,750,637
3. Member Contributions [1]		(1,381,917)
4. Administrative Expenses		118,926
5. Expected Return on Assets [2]		(10,769,321)
6. Plan Amendments		0
7. Recognition of Deferred Inflows / Outflows of Resources Related to:		
a. Liability Experience (Gains) / Losses	1,435,508	
b. Assumption Change (Gains) / Losses	70,867	
c. Investment Experience (Gains) / Losses	1,551,157	
d. Total: (7a)+(7b)+(7c)		3,057,532
8. Miscellaneous (Income) / Expense		0
9. Total Collective Pension Expense: (1)+(2)+(3)+(4)+(5)+(6)+(7d)+(8)		7,312,857
10. Employer Service Purchases		0
Pension Expense / (Income): (9) + (10)		**$ 7,312,857**

[1] Excludes member paid service purchases of $115,207.
[2] Cash flows assumed to occur mid-year.

GASB NO. 67 and GASB NO. 68
NOTES TO THE FINANCIAL STATEMENTS

The material presented herein is a subset of the information requested as Notes to the Financial Statements. Required information not provided herein is to be supplied by the plan.

Actuarial Assumptions and Inputs

Significant actuarial assumptions and other inputs used to measure the total pension liability:

Type of Plan	The Excise, Gaming and Conservation Officers' Fund is a single-employer plan for GASB accounting purposes.
Measurement Date	June 30, 2023
Valuation Date	
Assets:	June 30, 2023
Liabilities:	June 30, 2022 – The TPL as of June 30, 2023 was determined based on an actuarial valuation prepared as of June 30, 2022 rolled forward one year to June 30, 2023, using the following key actuarial assumptions and other inputs, such as benefit accruals and actual benefit payments during that time period.
Inflation	2.00%
Future Salary Increases	2.65% to 4.90%, based on service.
Cost-of-Living Increases	As of June 30, 2023: No COLA was granted for the 2023-2025 biennium. Thereafter, the following COLAs, compounded annually, were assumed: 0.4% beginning on January 1, 2026 0.5% beginning on January 1, 2034 0.6% beginning on January 1, 2039 As of June 30, 2022: Members in pay were granted a 1.00% COLA on January 1, 2022 and no COLA on January 1, 2023. Thereafter, the following COLAs, compounded annually, were assumed: 0.4% beginning on January 1, 2024 0.5% beginning on January 1, 2034 0.6% beginning on January 1, 2039

Mortality Assumption	Pub-2010 Public Retirement Plans Mortality Tables (Amount-Weighted) with a fully generational projection of mortality improvements using SOA Scale MP-2019. *Healthy Employees* – Safety Employee table with a 3 year set forward for males and no set forward for females. *Retirees* – Safety Retiree table with a 3 year set forward for males and no set forward for females. *Beneficiaries* – Contingent Survivor table with no set forward for males and a 2 year set forward for females. *Disableds* – General Disabled table.
Experience Study	The most recent comprehensive experience study, based on member experience between June 30, 2014 and June 30, 2019, was completed in February 2020. The demographic assumptions were approved by the Board in June 2020 and were used beginning with the June 30, 2020 actuarial valuation. Economic assumptions were updated and approved by the Board in May 2021 following the completion of an Asset-Liability study and first used in the June 30, 2021 actuarial valuation.
Discount Rate	6.25%, net of investment expenses The discount rate is equal to the expected long-term rate of return on plan investments, net of investment expense and including price inflation. There was no change in the discount rate from the prior measurement date. The INPRS Board of Trustees has established a funding policy of setting the employer contribution rate equal to the greater of 17.90% (the current contribution rate) or a rate equal to the actuarially determined contribution rate, which is based on the assumptions and methods selected by the Board for the annual actuarial valuations and projected covered member payroll. The June 30, 2023 actuarial valuation assumes a long-term rate of return on assets of 6.25%, a 20-year level dollar closed method for amortizing the future layers of unfunded actuarial accrued liability (30 years for amortization layers established prior to June 30, 2016), and a 5-year smoothing method for recognizing investment gains and losses in the actuarial value of assets.

Discount Rate Sensitivity

	1% Decrease 5.25%	Current Rate 6.25%	1% Increase 7.25%
Net Pension Liability	$44,068,146	$17,927,204	($3,612,279)

Classes of Plan Members Covered

The June 30, 2023 valuation was performed using census data provided by INPRS as of June 30, 2022. Standard actuarial techniques were used to roll forward the total pension liability computed as of June 30, 2022 to the June 30, 2023 measurement date using actual benefit payments during that period of time.

Number as of June 30, 2022	
1. Currently Receiving Benefits:	
Retired Members, Disabled Members, and Beneficiaries	275
2. Inactive Members Entitled To But Not Yet Receiving Benefits	7
3. Inactive Non-vested Members Entitled to a Refund of Member Contributions	148
4. Active Members	431
Total Covered Plan Members: (1)+(2)+(3)+(4)	861

Money-Weighted Rate of Return

The money-weighted rate of return equals investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. For the fiscal year ending June 30, 2023, the money-weighted return on the plan assets is 2.5%.

Components of Net Pension Liability

As of June 30, 2023		
Total Pension Liability	$	194,827,168
Fiduciary Net Position		176,899,964
Net Pension Liability	$	17,927,204
Ratio of Fiduciary Net Position to Total Pension Liability		90.80%

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION

SCHEDULE OF CHANGES IN THE TOTAL PENSION LIABILITY AND PLAN FIDUCIARY NET POSITION

Fiscal Year Ending June 30	2019	2020	2021	2022	2023
Total Pension Liability					
Total Pension Liability - beginning	$140,055,567	$152,206,710	$163,977,857	$180,847,713	$187,504,540
Service Cost (SC), beginning-of-year	3,551,307	3,983,271	4,049,528	4,630,578	4,537,000
Interest Cost, including interest on SC	9,447,926	10,294,177	11,081,170	11,345,860	11,750,637
Experience (Gains)/Losses	6,427,097	6,031,421	(1,098,925)	(1,430,549)	(902,300)
Assumption Changes	0	(1,984,346)	10,403,186	0	0
Plan Amendments	0	813,928	158,691	0	0
Actual Benefit Payments	(7,325,257)	(7,367,304)	(7,735,418)	(7,947,413)	(8,383,037)
Member Reassignments	0	0	0	0	205,121
Service Purchases	50,070	0	11,624	58,351	115,207
Net Change in Total Pension Liability	12,151,143	11,771,147	16,869,856	6,656,827	7,322,628
(a) Total Pension Liability - ending	$152,206,710	$163,977,857	$180,847,713	$187,504,540	$194,827,168
Plan Fiduciary Net Position					
Plan Fiduciary Net Position – beginning	$131,491,187	$142,114,618	$146,358,400	$184,313,811	$172,120,501
Contributions – employer	6,981,555	6,741,858	7,082,710	6,713,935	7,176,976
Contributions – non-employer	0	0	0	0	0
Contributions – member	1,367,778	1,298,579	1,332,899	1,352,214	1,497,124
Net investment income	9,711,357	3,677,162	37,369,760	(12,209,562)	4,402,205
Actual benefit payments	(7,325,257)	(7,367,304)	(7,735,418)	(7,947,413)	(8,383,037)
Net member reassignments	0	0	0	0	205,121
Administrative expense	(112,002)	(106,513)	(94,540)	(102,484)	(118,926)
Other	0	0	0	0	0
Net change in Plan Fiduciary Net Position	10,623,431	4,243,782	37,955,411	(12,193,310)	4,779,463
(b) Plan Fiduciary Net Position - ending	$142,114,618	$146,358,400	$184,313,811	$172,120,501	$176,899,964
Net Pension Liability - ending, (a) - (b)	$10,092,092	$17,619,457	($3,466,098)	$15,384,039	$17,927,204

Results prior to 2018 were produced by the prior actuary.

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION

SCHEDULE OF CHANGES IN THE TOTAL PENSION LIABILITY AND PLAN FIDUCIARY NET POSITION

(continued)

Fiscal Year Ending June 30	2014	2015	2016	2017	2018
Total Pension Liability					
Total Pension Liability - beginning	$118,097,227	$123,600,704	$132,795,504	$138,965,050	$142,602,804
Service Cost (SC), beginning-of-year	3,841,382	3,904,932	3,011,127	3,550,386	3,369,314
Interest Cost, including interest on SC	8,030,425	8,383,598	8,955,451	9,388,843	9,619,116
Experience (Gains)/Losses	(429,626)	845,498	469,533	119,830	(586,824)
Assumption Changes	0	2,669,133	0	(2,578,386)	(8,015,441)
Plan Amendments	0	0	0	0	0
Actual Benefit Payments	(5,938,704)	(6,608,361)	(6,245,234)	(6,826,316)	(6,934,957)
Member Reassignments	0	0	(21,331)	(25,694)	0
Service Purchases	0	0	0	9,091	1,555
Net Change in Total Pension Liability	5,503,477	9,194,800	6,169,546	3,637,754	(2,547,237)
(a) Total Pension Liability - ending	$123,600,704	$132,795,504	$138,965,050	$142,602,804	$140,055,567
Plan Fiduciary Net Position					
Plan Fiduciary Net Position – beginning	$97,018,792	$110,656,502	$110,037,215	$111,329,476	$120,016,301
Contributions – employer	5,358,617	5,215,010	5,366,551	5,691,313	6,174,724
Contributions – non-employer	0	0	0	0	0
Contributions – member	1,019,371	1,003,661	1,015,896	1,101,958	1,172,194
Net investment income	13,338,780	(71,559)	1,314,506	8,869,229	11,188,935
Actual benefit payments	(5,938,704)	(6,608,361)	(6,245,234)	(6,826,316)	(6,934,957)
Net member reassignments	0	0	(21,331)	(25,694)	0
Administrative expense	(140,354)	(158,038)	(138,127)	(123,665)	(136,045)
Other	0	0	0	0	10,035
Net change in Plan Fiduciary Net Position	13,637,710	(619,287)	1,292,261	8,686,825	11,474,886
(b) Plan Fiduciary Net Position - ending	$110,656,502	$110,037,215	$111,329,476	$120,016,301	$131,491,187
Net Pension Liability - ending, (a) - (b)	$12,944,202	$22,758,289	$27,635,574	$22,586,503	$8,564,380

Results prior to 2018 were produced by the prior actuary.

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION

SCHEDULE OF THE NET PENSION LIABILITY

Fiscal Year Ending June 30	2019	2020	2021	2022	2023
Total Pension Liability	$152,206,710	$163,977,857	$180,847,713	$187,504,540	$194,827,168
Plan Fiduciary Net Position	142,114,618	146,358,400	184,313,811	172,120,501	176,899,964
Net Pension Liability	$10,092,092	$17,619,457	($3,466,098)	$15,384,039	$17,927,204
Ratio of Plan Fiduciary Net Position to Total Pension Liability	93.37%	89.25%	101.92%	91.80%	90.80%
Covered-employee payroll [1]	$33,271,557	$32,490,899	$33,193,789	$32,356,321	$34,597,396
Net Pension Liability as a percentage of covered-employee payroll	30.33%	54.23%	-10.44%	47.55%	51.82%

Fiscal Year Ending June 30	2014	2015	2016	2017	2018
Total Pension Liability	$123,600,704	$132,795,504	$138,965,050	$142,602,804	$140,055,567
Plan Fiduciary Net Position	110,656,502	110,037,215	111,329,476	120,016,301	131,491,187
Net Pension Liability	$12,944,202	$22,758,289	$27,635,574	$22,586,503	$8,564,380
Ratio of Plan Fiduciary Net Position to Total Pension Liability	89.53%	82.86%	80.11%	84.16%	93.89%
Covered-employee payroll [1]	$25,824,626	$25,132,559	$25,525,549	$27,428,006	$29,386,684
Net Pension Liability as a percentage of covered-employee payroll	50.12%	90.55%	108.27%	82.35%	29.14%

[1] As provided by INPRS.

Results prior to 2018 were produced by the prior actuary.

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ending June 30	2019	2020	2021	2022	2023
Actuarially Determined Contribution [1]	$4,874,283	$2,862,448	$2,924,373	$3,200,040	$3,923,345
Actual employer contributions	$6,981,555	$6,741,858	$7,082,710	$6,713,935	$7,176,976
Annual contribution (deficiency) / excess	$2,107,272	$3,879,410	$4,158,337	$3,513,895	$3,253,631
Covered-employee payroll [2]	$33,271,557	$32,490,899	$33,193,789	$32,356,321	$34,597,396
Actual contributions as a percentage of covered-employee payroll	20.98%	20.75%	21.34%	20.75%	20.74%

Fiscal Year Ending June 30	2014	2015	2016	2017	2018
Actuarially Determined Contribution [1]	$5,340,533	$4,820,425	$4,077,706	$4,033,288	$4,393,309
Actual employer contributions	$5,358,617	$5,215,010	$5,366,551	$5,691,313	$6,174,724
Annual contribution (deficiency) / excess	$18,084	$394,585	$1,288,845	$1,658,025	$1,781,415
Covered-employee payroll [2]	$25,824,626	$25,132,559	$25,525,549	$27,428,006	$29,386,684
Actual contributions as a percentage of covered-employee payroll	20.75%	20.75%	21.02%	20.75%	21.01%

[1] Actuarially determined contribution rate for July-December was developed in the actuarial funding valuation completed two years prior to the fiscal year.
Actuarially determined contribution rate for January-June was developed in the actuarial funding valuation completed one year prior to the fiscal year.
The average of these two rates was applied to the actual covered employee payroll for the fiscal year to determine the contribution amount.
The surcharge rate uses the valuation completed two years ago for July-December and one year ago for January-June.

[2] As provided by INPRS.

Results prior to 2018 were produced by the prior actuary.

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION

SCHEDULE OF MONEY-WEIGHTED RETURNS

For Fiscal Year Ending June 30	Money-Weighted Return
2023	2.5%
2022	(6.6%)
2021	25.5%
2020	2.6%
2019	7.4%
2018	9.3%
2017	8.0%
2016	1.2%
2015	(0.1%)
2014	13.7%

Returns were provided by INPRS.

Appendix **Page**

MEMBER DATA RECONCILIATION
For June 30, 2022 Data used in the June 30, 2023 Valuation

	Active Members	Actives in DROP	Inactive Vested	Inactive Nonvested	Disabled	Retired	Beneficiary	Total
1. As of June 30, 2021	**406**	**5**	**8**	**144**	**3**	**208**	**46**	**820**
2. Data Adjustments								
New Participants	57	0	0	0	0	0	0	57
Rehires	1	0	0	(1)	0	0	0	0
Terminations:								
Not Vested	(11)	0	0	11	0	0	0	0
Deferred Vested	(2)	0	2	0	0	0	0	0
DROP	(9)	9	0	0	0	0	0	0
Disability	0	0	0	0	0	0	0	0
Retirements	(18)	(1)	(3)	0	0	22	0	0
Refund / Benefits Ended	(6)	0	0	(6)	0	0	(1)	(13)
Deaths:								
With Beneficiary	0	0	0	0	0	(1)	1	0
Without Beneficiary	0	0	0	0	0	0	(3)	(3)
Data Corrections	0	0	0	0	0	0	0	0
Net Change	12	8	(1)	4	0	21	(3)	41
3. As of June 30, 2022 [1]	**418**	**13**	**7**	**148**	**3**	**229**	**43**	**861**

[1] The valuation results were calculated using the prior year's census data and were adjusted for certain activity during fiscal year. Includes one inactive in DROP member as of June 30, 2022.

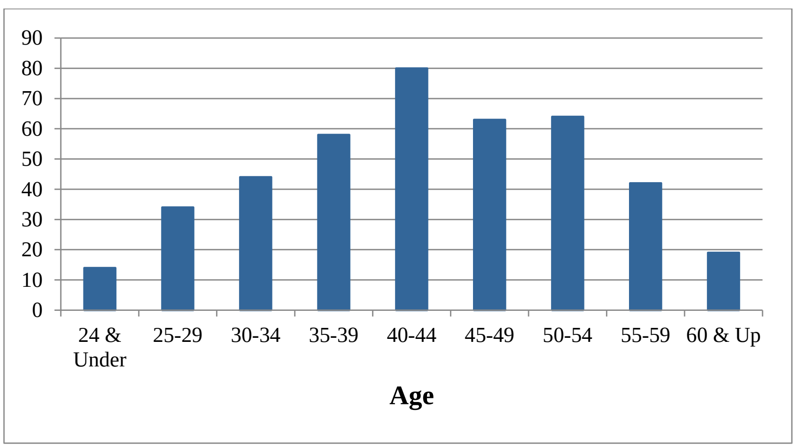
SUMMARY OF MEMBERSHIP DATA

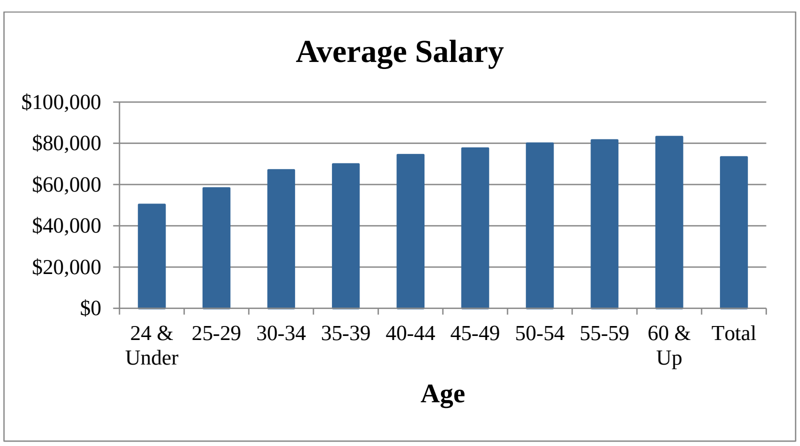
Valuation Date		June 30, 2022		June 30, 2023	% Change
Date of Membership Data [1]		July 1, 2021		July 1, 2022	
ACTIVE MEMBERS					
Number of Members					
Active		406		418	3.0%
Active in DROP		5		13	160.0%
Total		411		431	4.9%
Annual Membership Data Salary [2]	$	31,496,117	$	31,873,511	1.2%
Anticipated Payroll for Next Fiscal Year	$	33,213,764	$	35,514,227	6.9%
Active Member Averages					
Age		44.1		43.5	(1.4%)
Service		13.1		12.4	(5.3%)
Annual Membership Data Salary	$	76,633	$	73,952	(3.5%)
INACTIVE MEMBERS					
Number of Members					
Inactive Vested		8		7	(12.5%)
Inactive Non-Vested		144		148	2.8%
Total		152		155	2.0%
Inactive Vested Member Averages					
Age		48.0		48.0	0.0%
Service		19.0		17.5	(8.3%)
RETIREES, DISABLEDS, AND BENEFICIARIES					
Number of Members					
Retired		208		229	10.1%
Disabled		3		3	0.0%
Beneficiaries		46		43	(6.5%)
Total		257		275	7.0%
Annual Benefits					
Retired	$	6,709,890	$	7,411,175	10.5%
Disabled		48,610		49,096	1.0%
Beneficiaries		573,761		550,128	(4.1%)
Total	$	7,332,261	$	8,010,399	9.2%

[1] The valuation results were calculated using the prior year's census data and were adjusted for certain activity during fiscal year.
[2] Annualized for actives with less than a year of service. Actives with no salary provided are defaulted to the average salary.

ACTIVE MEMBERS[1]
As of June 30, 2022 for the June 30, 2023 Valuation

	Count of Members			FY 2022 Annual Membership Data Salary		
Age	Male	Female	Total	Male	Female	Total
24 & Under	14	0	14	$ 703,129	$ 0	$ 703,129
25-29	29	5	34	1,693,861	285,813	1,979,674
30-34	40	4	44	2,645,849	301,355	2,947,204
35-39	53	5	58	3,746,344	304,563	4,050,907
40-44	67	13	80	4,958,311	991,622	5,949,933
45-49	53	10	63	4,127,706	758,712	4,886,418
50-54	58	6	64	4,697,125	421,645	5,118,770
55-59	40	2	42	3,242,803	181,862	3,424,665
60 & Up	18	1	19	1,498,603	80,465	1,579,068
Total	372	46	418	$ 27,313,731	$ 3,326,037	$ 30,639,768





[1] Actives with no salary provided are defaulted to the average salary.

AGE AND SERVICE DISTRIBUTION
As of June 30, 2022 for the June 30, 2023 Valuation

Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
24 & Under	Number	14	0	0	0	0	0	0	0	14
	Total Salary	$ 703,129	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 703,129
	Average Sal.	$ 50,224	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 50,224
25-29	Number	20	14	0	0	0	0	0	0	34
	Total Salary	$ 1,100,411	$ 879,263	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,979,674
	Average Sal.	$ 55,021	$ 62,805	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 58,226
30-34	Number	10	24	10	0	0	0	0	0	44
	Total Salary	$ 571,035	$ 1,669,482	$ 706,687	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,947,204
	Average Sal.	$ 57,104	$ 69,562	$ 70,669	$ 0	$ 0	$ 0	$ 0	$ 0	$ 66,982
35-39	Number	7	13	20	18	0	0	0	0	58
	Total Salary	$ 314,823	$ 884,447	$ 1,449,608	$ 1,402,029	$ 0	$ 0	$ 0	$ 0	$ 4,050,907
	Average Sal.	$ 44,975	$ 68,034	$ 72,480	$ 77,891	$ 0	$ 0	$ 0	$ 0	$ 69,843
40-44	Number	10	7	17	46	0	0	0	0	80
	Total Salary	$ 524,196	$ 494,705	$ 1,282,675	$ 3,648,357	$ 0	$ 0	$ 0	$ 0	$ 5,949,933
	Average Sal.	$ 52,420	$ 70,672	$ 75,451	$ 79,312	$ 0	$ 0	$ 0	$ 0	$ 74,374
45-49	Number	9	3	15	18	15	3	0	0	63
	Total Salary	$ 570,598	$ 208,783	$ 1,280,772	$ 1,384,597	$ 1,203,239	$ 238,429	$ 0	$ 0	$ 4,886,418
	Average Sal.	$ 63,400	$ 69,594	$ 85,385	$ 76,922	$ 80,216	$ 79,476	$ 0	$ 0	$ 77,562
50-54	Number	9	8	7	19	9	12	0	0	64
	Total Salary	$ 430,526	$ 670,634	$ 592,362	$ 1,543,147	$ 822,983	$ 1,059,118	$ 0	$ 0	$ 5,118,770
	Average Sal.	$ 47,836	$ 83,829	$ 84,623	$ 81,218	$ 91,443	$ 88,260	$ 0	$ 0	$ 79,981
55-59	Number	4	11	7	10	3	4	2	1	42
	Total Salary	$ 166,494	$ 927,836	$ 601,023	$ 864,909	$ 229,269	$ 342,714	$ 194,816	$ 97,604	$ 3,424,665
	Average Sal.	$ 41,624	$ 84,349	$ 85,860	$ 86,491	$ 76,423	$ 85,679	$ 97,408	$ 97,604	$ 81,540
60 & Up	Number	2	7	6	1	0	0	1	2	19
	Total Salary	$ 104,646	$ 603,140	$ 487,892	$ 85,575	$ 0	$ 0	$ 116,816	$ 180,999	$ 1,579,068
	Average Sal.	$ 52,323	$ 86,163	$ 81,315	$ 85,575	$ 0	$ 0	$ 116,816	$ 90,500	$ 83,109
Total	Number	85	87	82	112	27	19	3	3	418
	Total Salary	$ 4,485,858	$ 6,338,290	$ 6,401,019	$ 8,928,614	$ 2,255,491	$ 1,640,261	$ 311,632	$ 278,603	$ 30,639,768
	Average Sal.	$ 52,775	$ 72,854	$ 78,061	$ 79,720	$ 83,537	$ 86,330	$ 103,877	$ 92,868	$ 73,301

[1] Actives with no salary provided are defaulted to the average salary.

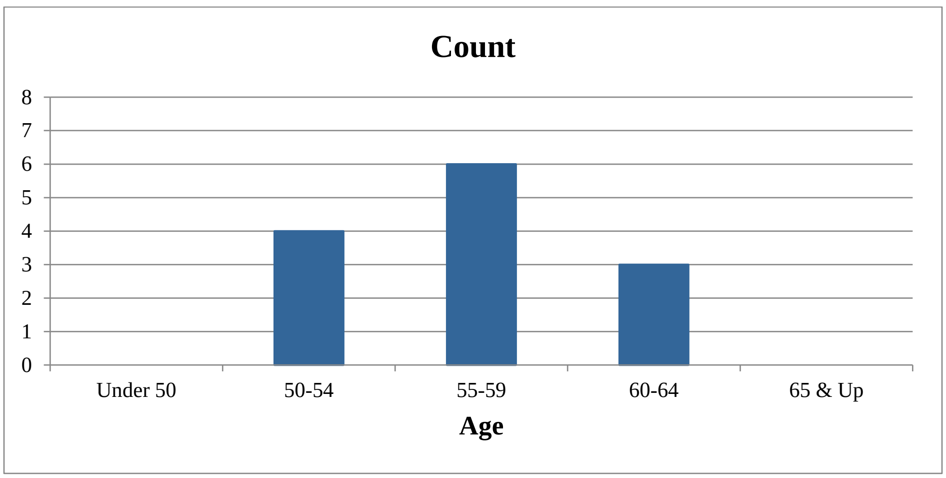
ACTIVE MEMBERS IN DROP
As of June 30, 2022 for the June 30, 2023 Valuation

Count of Members

Age	Male	Female	Total
Under 50	0	0	0
50-54	4	0	4
55-59	6	0	6
60-64	3	0	3
65 & Up	0	0	0
Total	13	0	13

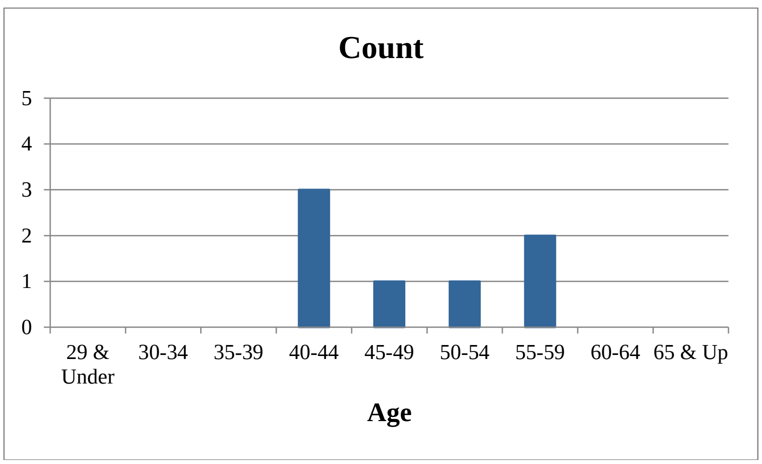
FY 2022 Annual Membership Data Salary

Total Salary	$ 1,233,743
Average Salary	$ 94,903



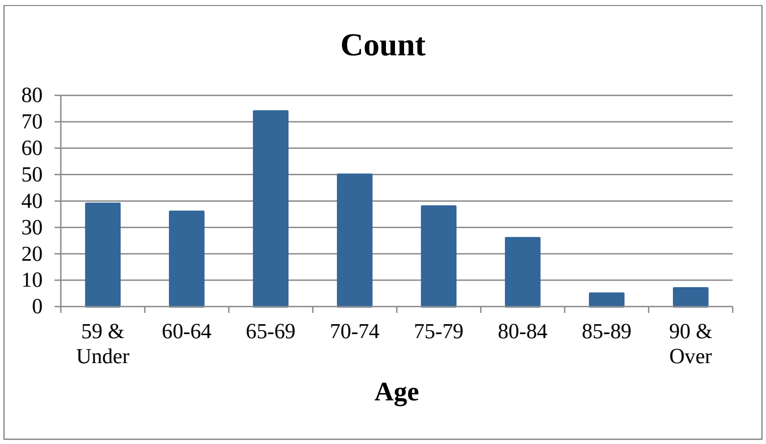
INACTIVE VESTED MEMBERS
As of June 30, 2022 for the June 30, 2023 Valuation

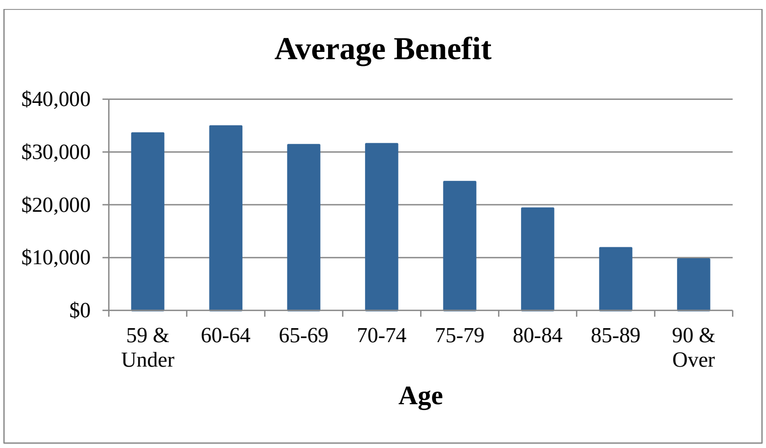
	Count of Members		
Age	Male	Female	Total
29 & Under	0	0	0
30-34	0	0	0
35-39	0	0	0
40-44	0	3	3
45-49	1	0	1
50-54	1	0	1
55-59	2	0	2
60-64	0	0	0
65 & Up	0	0	0
Total	4	3	7



MEMBERS AND BENEFICIARIES RECEIVING BENEFITS
As of June 30, 2022 for the June 30, 2023 Valuation

	Count of Members			Annual Benefits		
Age	Male	Female	Total	Male	Female	Total
59 & Under	35	4	39	$ 1,216,551	$ 91,162	$ 1,307,713
60-64	32	4	36	1,168,630	86,560	1,255,190
65-69	64	10	74	2,137,300	180,361	2,317,661
70-74	40	10	50	1,420,149	155,911	1,576,060
75-79	30	8	38	818,288	106,404	924,692
80-84	15	11	26	376,080	126,273	502,353
85-89	2	3	5	30,864	28,118	58,982
90 & Over	3	4	7	41,521	26,227	67,748
Total	221	54	275	$ 7,209,383	$ 801,016	$ 8,010,399





MEMBERS AND BENEFICIARIES RECEIVING BENEFITS
As of June 30, 2022 for the June 30, 2023 Valuation

Schedule of Average Benefit Payments[1]

	Years of Credited Service						
For the Year Ended June 30, 2023	< 10	10 - 14	15 - 19	20 - 24	25 - 29	30 +	Total
Average Monthly Defined Benefit	$859	$1,532	$1,188	$1,147	$2,445	$2,997	$2,427
Average Final Average Salary [2]	$51,086	$70,230	$53,982	$42,115	$57,683	$59,694	$58,414
Number of Benefit Recipients	2	21	23	17	88	124	275

Schedule of Benefit Recipients by Type of Benefit Option[1]

	Number of Recipients by Benefit Option			
Amount of Monthly Benefit (in dollars)	Joint with 50% Survivor Benefits	Survivors	Disability	Total Benefit Recipients
1 - 500	2	4	1	7
501 - 1,000	10	17	0	27
1,001 - 1,500	24	17	1	42
1,501 - 2,000	15	3	0	18
2,001 - 2,500	40	1	1	42
2,501 - 3,000	48	1	0	49
Over 3,000	90	0	0	90
Total	229	43	3	275

[1]Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
[2]Excludes the 13 in-pay members who are missing a final average salary in the data.

MEMBERS AND BENEFICIARIES RECEIVING BENEFITS
As of June 30, 2022 for the June 30, 2023 Valuation

	Added to Rolls		Removed from Rolls		Rolls - End of Year				
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits	Percent Change In Total Annual Benefits[1,2]	Average Annual Benefit	Percent Change In Average Annual Benefit
2023 [3]	22	$654	4	$38	275	$8,010	9.2%	$29,129	2.1%
2022 [3]	12	491	7	72	257	7,332	5.1	28,530	3.0
2021 [3]	7	218	3	23	252	6,979	2.6	27,695	1.0
2020 [3]	13	438	5	46	248	6,800	5.8	27,421	2.4
2019 [3]	9	216	3	19	240	6,426	2.9	26,776	0.3
2018 [3]	13	404	2	23	234	6,246	5.6	26,692	0.7
2017 [3]	8	314	5	60	223	5,912	4.4	26,512	3.0
2016 [3]	14	506	1	4	220	5,661	8.7	25,733	2.2
2015 [3]	15	556	1	5	207	5,210	11.7	25,170	4.1
2014 [3]	0	0	0	0	193	4,666	0.0	24,177	0.0

[1] Dollar amounts are in thousands except for the average annual benefit.
[2] End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases.
[3] The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Definitions

Fiscal year	Twelve month period ending June 30.
Participation	All Indiana State Excise Police Officers, all Indiana State Conservation Enforcement officers, all Indiana Gaming Agents, and all Indiana Gaming Control Officers must become members as a condition of employment.
Member contributions	Each member is required to contribute at the rate of 4% of pay. These contributions are kept on deposit and credited with interest until such time as they are refunded or used to provide benefits at retirement. This interest crediting rate is established annually by the board. It is based on the 10-Year Treasury Yield, an average of January through March month-end 10-year US Treasury Note yields in the current year.
Average monthly earnings	Average monthly earnings is the monthly average of earnings calculated based on any five years of salary within the 10 years preceding retirement that produce the highest such average.

Eligibility for Benefits

Deferred vested	15 or more years of creditable service and no longer active.
Disability retirement	As determined by a disability medical panel.
Early retirement	Age 45 with 15 or more years of creditable service.
Normal retirement	Earliest of: - Age 65 (mandatory retirement) - 10 or more years of creditable service for members hired on or after age 50 - Age 55 with sum of age and creditable service equal to 85 or more - Age 50 with 25 or more years of creditable service - Age 60 with 15 or more years of creditable service
Pre-retirement death	Active member or 15 or more years of creditable service.

Monthly Benefits Payable

Normal retirement	The normal retirement benefit is a monthly annuity payable in a Joint and 50% Surviving Beneficiary form and is equal to 25% of average monthly earnings, plus 1-2/3% of average monthly earnings for years of creditable service more than 10

	years. The normal retirement benefit may not exceed 75% of the average annual salary.
Early retirement	The early retirement benefit is the accrued retirement benefit determined as of the early retirement date and payable commencing at the normal retirement date. A member may elect to have the benefit commence prior to normal retirement provided the benefit is reduced by 1/4% for each month that the benefit commencement date precedes age 60. The early retirement benefit may not exceed 75% of the average annual salary.
Deferred retirement	If termination is prior to earning 15 years of service, the member shall be entitled to a lump sum refund of employee contributions plus accumulated interest. If termination is after earning 15 years of service, the termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing as of the normal retirement date. The member may elect to receive a reduced early retirement benefit beginning at age 45.
Disability	If disability occurs in the line of duty, the disability retirement benefit is the member's monthly salary multiplied by the degree of impairment and is payable commencing the month following disability date without reduction for early commencement. The benefit shall not be less than 20% of the member's salary if the member has more than 5 years of service, or 10% if 5 or less years of service. If disability does not occur in the line of duty, the disability retirement benefit is equal to 50% of the member's monthly salary multiplied by the degree of impairment and is payable commencing the month following disability date without reduction for early commencement. The benefit shall not be less than 10% of the member's salary if the member has more than 5 years of service, or 5% if 5 or less years of service.
Pre-retirement death	If death is prior to earning 15 years of service, an inactive member's beneficiary or estate shall receive employee contributions plus accumulated interest. If death is for an active member, regardless of service, or an inactive member with 15 years of service, the spouse or dependent beneficiary is entitled to receive the monthly

	survivor annuity under the assumption that the member had retired with 25 years of service at age 50. The survivor annuity is paid as a 50% joint and survivor annuity, except in the case of an active death in the line of duty, where the benefit is payable as a 100% joint and survivor annuity.
Deferred retirement option plan ("DROP")	Effective July 1, 2008, a DROP is established for all plan participants.

An employee may make a DROP election as provided in this chapter only if, immediately upon termination, he/she is eligible to receive an unreduced annual retirement allowance under the provisions of the EG&C Fund on his/her entry date into the DROP.

The DROP retirement benefit will be based on average annual salary and years of creditable service on the date the member enters the DROP. Average annual salary is based on the 5 highest years of annual salary in the 10 years immediately preceding the member's retirement date.

Any member who chooses the DROP shall agree to the following:

- The member shall execute an irrevocable election to retire on the DROP retirement date and shall remain in active service until that date.
- While in the DROP, the member shall continue to make contributions to the EG&C Fund under the provisions of that fund.
- The member shall elect a DROP retirement date not less than 12 months and not more than 36 months after the member's DROP entry date.
- The member may not remain in the DROP after the date the member reaches any mandatory retirement age as set forth in the EG&C Fund.
- The member may make an election to enter the DROP only once in the member's lifetime.
- A member who retires on his/her DROP retirement date may elect to receive an annual retirement allowance:

  a) Computed as if the member had never entered the DROP; or

  b) Consisting of the DROP frozen benefit, plus an additional amount paid as the member elects, determined by multiplying the DROP frozen benefit by the number of months the member was in DROP.

	No cost of living increase is applied to a DROP frozen benefit while the participant is in the DROP. After the participant's DROP retirement date, cost of living increases determined under the EG&C Fund apply to the participant's annual retirement allowance.
Cost-of-Living-Adjustments	The employer-funded monthly pension benefits for members in pay status are increased periodically to preserve purchasing power that is diminished due to inflation. Such increases are not guaranteed by Statute and will only be provided by legislative action. A "13th check" was paid to each member in pay status during fiscal year 2018, 2019, 2020 and 2021. The amount of the 13th check varied based on the years of creditable service the member had earned prior to retirement. Legislation passed in the 2018 legislative session creates a funding mechanism to provide for future benefit increases or 13th checks. The INPRS Board has the authority to have employers contribute up to 1% of member pay into the fund. Increases or payments are made upon passed legislation subject to the availability of funds to provide the benefit. Legislation passed in 2021 provided for a 1% increase effective January 1, 2022 and no increase through the remainder of the biennium.
Forms of payment a. Single life annuity	Member will receive a monthly benefit for life, but there are no monthly payments to anyone after death.
b. Joint with one-half survivor benefits	Member will be paid a monthly benefit for life. After death, one-half (1/2) of the benefit will be paid to the spouse or parent for their lifetime or the dependent until age 18.

Changes in Plan Provisions since the Prior Year

None.

ACTUARIAL METHODS

1. Actuarial Cost Method

The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 20-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 20-year period (gain or loss bases established prior to June 30, 2016 were amortized over 30 years and will continue to be amortized over 30 -year period). However, when the plan is at or above 100% funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payments each year. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

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

Member census data as of June 30, 2022 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2022 and June 30, 2023. The valuation results from June 30, 2022 were rolled-forward to June 30, 2023 to reflect benefit accruals during the year less benefits paid.

2. COLA Surcharge

The COLA Surcharge is developed by determining the assets needed at the start of the next biennium to fund the post-retirement benefit increases anticipated to be granted in that biennium. This amount is divided by the present value of expected payroll over which the accumulations will occur.

3. Asset Valuation Method

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

4. Anticipated Payroll

The Anticipated Payroll for the fiscal year beginning July 1, 2023 is equal to the actual payroll during the year ending June 30, 2023, increased with one year of salary scale.

5. Employer Contribution Rate

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

Changes in Actuarial Methods since the Prior Year

None.

ACTUARIAL ASSUMPTIONS

Valuation Date — June 30, 2023

Economic Assumptions

1. Investment return — 6.25% per year, compounded annually (net of administrative and investment expenses)

2. Inflation — 2.00% per year

3. Salary increase

Service	Wage Inflation	Merit	Salary Increase
0	2.65%	2.25%	4.90%
1	2.65%	2.00%	4.65%
2	2.65%	1.75%	4.40%
3	2.65%	1.50%	4.15%
4	2.65%	1.25%	3.90%
5	2.65%	1.00%	3.65%
6	2.65%	0.75%	3.40%
7	2.65%	0.50%	3.15%
8	2.65%	0.25%	2.90%
9+	2.65%	0.00%	2.65%

4. Interest on member balances — 3.30% per year

5. Cost-of-Living Adjustment (COLA) — No COLA was granted for the 2023-2025 biennium. Thereafter, the following COLAs, compounded annually, were assumed:
0.4% beginning on January 1, 2026
0.5% beginning on January 1, 2034
0.6% beginning on January 1, 2039

Demographic Assumptions

1. Mortality — Pub-2010 Public Retirement Plans Mortality Tables (Amount-Weighted) with a fully generational projection of mortality improvements using SOA Scale MP-2019.

Healthy Employees – Safety Employee table with a 3 year set forward for males and no set forward for females.

Retirees – Safety Retiree table with a 3 year set forward for males and no set forward for females.

Mortality (continued)

Beneficiaries – Contingent Survivor table with no set forward for males and a 2 year set forward for females.

Disableds – General Disabled table.

2. Disability

Age	Sample Rates
<=30	0.100%
35	0.200%
40	0.300%
45	0.400%
50+	0.500%

Rates for ages 30-50 increase by 0.02% per year.

Active members who become disabled are assumed to receive 20% of their salary if they have less than 5 years of service and 40% of their salary if they have 5 or more years of service.

3. Retirement

Age	Eligible for **Reduced** Benefit	Eligible for **Unreduced** Benefit
45-54	2%	20%
55-58	2%	25%
59	2%	35%
60	N/A	55%
61	N/A	65%
62-64	N/A	75%
65+	N/A	100%

Active members: Of those who retire, 50% enter DROP and the other 50% retire immediately. Those who elect to enter DROP are assumed be in DROP for a period of 3 years, upon which time they take the full lump sum and commence their annuity benefit.

Inactive vested members are assumed to commence their retirement benefit at their earliest eligible retirement date (age 45, or current age if greater).

4. Termination

Years of Service	Rate
0-1	10.0%
2	9.0%
3	8.0%
4	7.0%
5	6.0%
6	5.0%
7	4.0%
8	3.0%
9	2.0%
10+	1.0%

Other Assumptions

1. Form of payment — Members are assumed to elect either a single life annuity or a 50% joint survivor benefit based on the marriage assumptions below.

2. Marital status
   a. Percent married — 90% of members are assumed to be married or to have a dependent beneficiary.

   b. Spouse's age — Male members are assumed to be three (3) years older than their spouses and female members are assumed to be two (2) years younger than their spouses.

3. Decrement timing — Decrements are assumed to occur at the beginning of the year.

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

5. Active Member Death — 20% are assumed to be in the line of duty and 80% are other than in the line of duty.

Changes in Assumptions since the Prior Year

None.

Data Adjustments

Active and retired member data is reported as of June 30. Member census data as of June 30, 2022 was used in the valuation and adjusted. Standard actuarial roll-forward techniques were then used to project the liability computed as of June 30, 2022 to the June 30, 2023 valuation date. The normal cost rate is assumed to remain unchanged between June 30, 2022 and June 30, 2023.

The member total payroll and the asset information for this valuation were furnished as of June 30, 2023. Total payroll in FYE 2024 is assumed to increase by the salary growth assumption over the total payroll observed for FYE 2023. We did not audit the information provided, but we did review it thoroughly for reasonableness and compared it with the prior year's submission for consistency.

Other Technical Valuation Procedures

Salary increases are assumed to apply to annual amounts.

Decrements are assumed to occur at the beginning of the year. Standard adjustments are made for multiple decrements.

No actuarial liability is included for participants who terminated without being vested prior to the valuation date, except those due a refund of contributions.

Accrued Service	Service credited under the plan that was rendered before the date of the actuarial valuation.
Actuarial Assumptions	Estimates of future experience with respect to demographic or economic events. Demographic assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement plan benefits between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method."
Actuarial Equivalent	A single amount or series of amounts of equal value to another single amount or series of amounts computed on the basis of a given set of actuarial assumptions.
Actuarial Accrued Liability	The difference between the actuarial present value of plan benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial liability."
Actuarial Present Value	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
Amortization	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
Experience Gain (Loss)	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
Normal Cost	The actuarial present value of retirement plan benefits allocated to the current year by the actuarial cost method.
Unfunded Actuarial Accrued Liability	The difference between actuarial liability and the actuarial value of assets. Sometimes referred to as "unfunded accrued liability" or "unfunded liability". Most retirement plans have unfunded actuarial liability. They arise anytime new benefits are added and anytime an actuarial loss is realized.