



**Cavanaugh Macdonald**  
CONSULTING, LLC

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## **Indiana Public Retirement System**

### **Judges' Retirement System**

Actuarial Valuation as of  
June 30, 2021





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

December 13, 2021

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 Judges' Retirement System (JRS) as of June 30, 2021, for the purpose of estimating the actuarial required contribution for the plan year ending June 30, 2023. 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, 2021. There were no changes in the plan provisions, demographic assumptions or actuarial methods from last year. New economic assumptions approved by the Board in May 2021 are reflected in the report. Please refer to the May 7, 2021 meeting minutes for complete details.

In preparing our report, we relied, without audit, on information (some oral and some in writing) supplied by the 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 be sure 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 JRS 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 2021 valuations to the Board on February 26, 2021, and the Board subsequently adopted their use at its May 7, 2021 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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We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions. We will continue to monitor the situation and advise the Board in the future of any adjustments that we believe would be appropriate.

In order to prepare the results in this report, we have utilized appropriate actuarial models that were developed for this purpose. These models use 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 JRS 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 results of the risk report are applicable to the June 30, 2021 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, 2021, 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,

A handwritten signature in blue ink that reads "Brent A. Banister".

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

A handwritten signature in blue ink that reads "Edward J. Koebel".

Edward Koebel, FCA, EA, MAAA  
Chief Executive Officer

A handwritten signature in blue ink that reads "Virginia Fritz".

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



**TABLE OF CONTENTS**

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<b><u>Sections</u></b>	<b><u>Page</u></b>
<b>Actuarial Certification Letter</b>	
<b>Section 1 – Board Summary.....</b>	<b>1</b>
<b>Section 2 – Scope of the Report.....</b>	<b>7</b>
<b>Section 3 – Assets .....</b>	<b>8</b>
Table 1 – Development of Market Value of Assets .....	9
Table 2 – Development of Actuarial Value of Assets .....	10
<b>Section 4 – Plan Liabilities .....</b>	<b>11</b>
Table 3 – Actuarial Accrued Liability .....	12
Table 4 – Solvency Test .....	13
Table 5 – Reconciliation of Unfunded Actuarial Accrued Liability .....	14
Table 6 – Actuarial Gain/(Loss).....	15
Table 7 – Gain/(Loss) Analysis by Source.....	16
Table 8 – Projected Benefit Payments.....	17
<b>Section 5 – Employer Contributions .....</b>	<b>18</b>
Table 9 – Schedule of Amortization Bases .....	19
Table 10 – Actuarially Determined Contribution Rate .....	20
Table 11 – Investment Return Sensitivity .....	21
<b>Section 6 – GASB Information .....</b>	<b>22</b>
Table 12 – Statement of Fiduciary Net Position under GASB No. 67 .....	23
Table 13 – Statement of Changes in Fiduciary Net Position under GASB No. 67 .....	24
Table 14 – Schedule of Changes in Net Pension Liability under GASB No. 68.....	25
Table 15 – Deferred Outflow of Resources.....	26
Table 16 – Deferred Inflow of Resources .....	27
Table 17 – Deferred Inflows and Outflows to be Recognized in Pension Expense .....	28
Table 18 – Pension Expense under GASB No. 68 .....	29
Notes to the Financial Statements under GASB No. 67 and 68 .....	30
Required Supplemental Information under GASB No. 67 and 68 .....	33
 Appendix A – Membership Data .....	 39
Appendix B – Summary of Plan Provisions .....	47
Appendix C – Summary of Actuarial Methods and Assumptions .....	51
Appendix D – Glossary of Actuarial Terms .....	56



## SECTION 1 – BOARD SUMMARY

This report presents the results of the June 30, 2021 actuarial valuation of the Judges’ Retirement System (JRS). The primary purposes of performing this actuarial valuation are to:

- Determine the contribution amount for the plan year ending June 30, 2023 that will be sufficient to meet the funding policy.
- Disclose asset and liability measurements as well as the plan’s funded status on the valuation date.
- Compare actual and expected experience by the Fund during the plan year ending June 30, 2021.
- Analyze and report on trends in plan contributions, assets and liabilities over the past several years.

### VALUATION RESULTS

Based on the results of the Asset-Liability study, which were discussed at the May 2021 Board meeting, the Board approved portfolio revisions and a new set of economic assumptions to be first used in the June 30, 2021 actuarial valuations. This resulted in a reduction of the investment return from 6.75% to 6.25%, but also impacted other assumptions such as price and wage inflation. There were no changes adopted by the Board to the demographic assumptions, plan provisions, actuarial methods, or funding policy.

The actuarial valuation results provide a “snapshot” view of the plan’s financial condition on June 30, 2021. The plan’s unfunded actuarial accrued liability (UAAL) decreased from \$27.8 million last year to \$26.4 million this year and the funded ratio had a slight increase from 95.3% to 95.9%. The primary factor behind the decrease in the UAAL was favorable asset experience (a \$19.4 million gain) and liability experience gains, which were offset by an increase on liabilities due to economic assumption changes (a \$26.2 million increase). The plan will continue to recognize this year’s large asset return gains, as they are spread over the next four years.

A summary of the key results from the June 30, 2021 actuarial valuation compared to the June 30, 2020 valuation is shown in the following table. Further detail on the valuation results can be found in the following sections of this Board Summary.

Valuation Results	June 30, 2020	June 30, 2021
Unfunded Actuarial Accrued Liability	\$ 27,769,036	\$ 26,417,208
Funded Ratio (Actuarial Assets)	95.31%	95.89%
Normal Cost Rate	29.89%	33.23%
UAAL Amortization Rate	5.33%	5.04%
Actuarially Determined Contribution Rate	35.22%	38.27%
Member Contribution Rate	(6.00%)	(6.00%)
Required State Contribution Rate	29.22%	32.27%

Numerous components, as examined in the following discussion, contributed to the change in the plan’s assets, liabilities, and actuarial determined contribution rate between June 30, 2020 and June 30, 2021.



**SECTION 1 – BOARD SUMMARY**

**ASSETS**

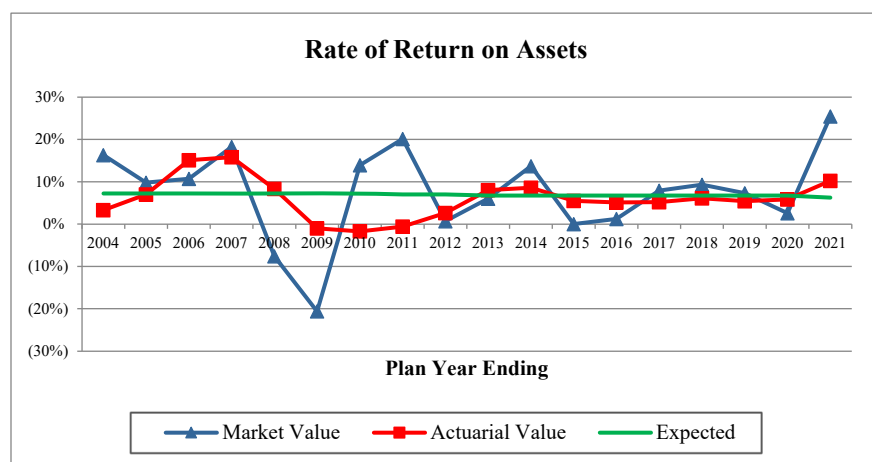
As of June 30, 2021, the plan had net assets of \$688 million when measured on a market value basis. This was an increase of \$134 million from the prior year.

The market value of assets is not used directly in the calculation of the unfunded actuarial accrued liability and the actuarial required contribution. 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 \$616 million, an increase of \$51 million from the prior year.

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

	<b>Market Value</b>	<b>Actuarial Value</b>
<b>Net Assets, June 30, 2020</b>	\$ 554,121,143	\$ 564,741,115
- Employer and Member Contributions	+ 22,661,411	+ 22,661,411
- Benefit Payments and Refunds	- 28,916,344	- 28,916,344
- Net Investment Income	+ 140,126,639	+ 57,268,371
<b>Net Assets, June 30, 2021</b>	<b>\$ 687,992,849</b>	<b>\$ 615,754,553</b>
Estimated Rate of Return, Net of Expenses	25.4%	10.2%

The estimated rate of return on the actuarial value of assets was 10.2%, which was higher than the 6.75% investment return assumption applicable for the year ended June 30, 2021. As a result, there was an experience gain on assets of \$19.4 million. The estimated investment return on the market value of assets for FY 2021 of 25.4%, resulted in a change in the deferred investment experience from a net deferred investment loss of \$10.6 million in last year’s valuation to a net deferred investment gain of \$72.2 million in the current valuation. See Table 1 and Table 2 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.*



## SECTION 1 – BOARD SUMMARY

### 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 on both a market value and actuarial value of assets basis is shown as of June 30, 2021 in the following table:

	Market Value	Actuarial Value
Actuarial Accrued Liability	\$ 642,171,761	\$ 642,171,761
Value of Assets	687,992,849	615,754,553
Unfunded Actuarial Accrued Liability	\$ (45,821,088)	\$ 26,417,208
Funded Ratio	107.14%	95.89%

See Table 3 of this report for the development of the unfunded actuarial accrued liability.

The UAAL (on an actuarial basis) as of June 30, 2021 was a \$26.4 million deficit, a decrease of \$1.4 million from the \$27.8 million deficit last year. The decrease was primarily driven by an actuarial gain on assets of \$19.4 million due to higher-than-expected market returns and liability experience gains, which was offset by a \$26.2 million increase in liabilities due to assumption changes. The components of the change in the UAAL are quantified in Table 5 of this report. See Table 6 and Table 7 of this report for a breakdown of the components of experience gains/losses for greater detail.

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).

	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021
Funded Ratio	93.9%	94.4%	91.8%	95.3%	95.9%
UAAL (in millions)	\$31.7	\$30.9	\$47.9	\$27.8	\$26.4

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.

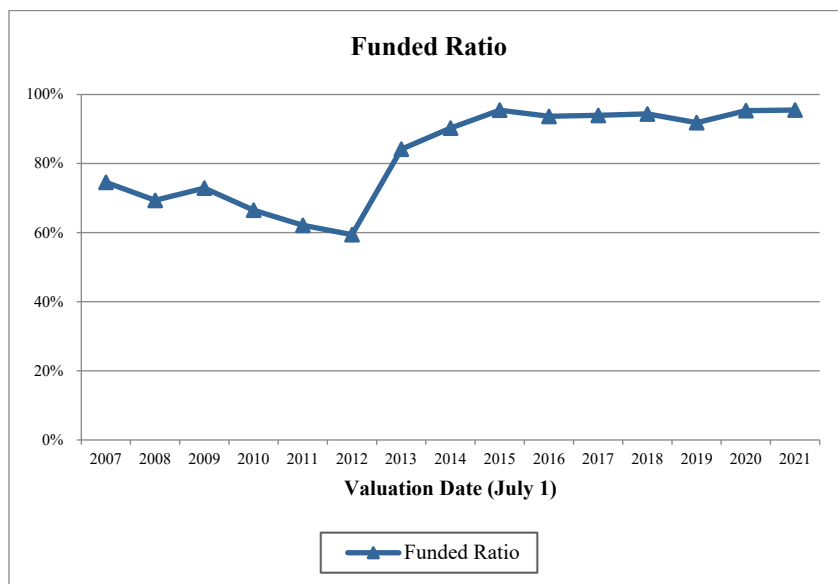




## SECTION 1 – BOARD SUMMARY

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As the following graph of historical funded ratios shows, JRS has been reasonably well funded for the last several years.



### ACTUARIALLY DETERMINED CONTRIBUTION RATE

The State’s funding policy is to contribute an appropriated amount that is estimated at the start of each biennium. The specific amounts in the appropriation bill are guided by the funding requirements of the Plan from an actuarial perspective. A traditional funding strategy includes:

- 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 amortization base. Whenever the Plan funded ratio exceeds 100%, 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.

The actuarially determined contribution amount for the judges includes a normal cost which is theoretically based on all judges’ payroll. However, member contributions are only made on payroll of judges with less than 22 years of service, while the employer contributions are based upon a direct legislative allocation determined from estimated total payroll. **Consequently, the actual funding requirements are adjusted to reflect only the pay upon which member contributions are made.** While this approach may make the presentation of results more complicated and not directly comparable to other plans, it nonetheless produces an amount that will, if contributed, systematically fund the Plan through time.



**SECTION 1 – BOARD SUMMARY**

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See Table 10 of this report for the detailed development of the contribution rates which are summarized in the following table:

<b>Contribution Rates</b>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
Normal Cost Rate	29.89%	33.23%
UAAL Amortization Rate	5.33%	5.04%
Actuarially Determined Contribution Rate	35.22%	38.27%
Member Contribution Rate	(6.00%)	(6.00%)
Required State Contribution Rate	29.22%	32.27%
Estimated Payroll	\$ 60,109,120	\$ 62,714,587
Actuarially Determined Contribution	\$ 17,563,885	\$ 20,237,997

Because the funding of the plan is largely based on payroll, the Actuarially Determined Contribution for FY 2024 can be assumed to be 2.65% (payroll growth assumption) higher than the FY 2023 rate shown above in the June 30, 2021 valuation, or \$20,774,304.

House Enrolled Act No. 1001 appropriated funds in the amount of \$10,410,696 for the fiscal year ending June 30, 2022 and \$10,893,703 for the fiscal year ending June 30, 2023. Additional funding is added from court and docket fees. The Board will recommend appropriation amounts to the Indiana Legislature for the next biennium (FY 2024 and FY 2025) based on the June 30, 2022 valuation. Therefore, the June 30, 2021 actuarial determined contribution is not directly used in the funding of the plan.

**SECTION 1 – BOARD SUMMARY****SUMMARY OF PRINCIPAL RESULTS**

	<b>June 30, 2019</b>	<b>June 30, 2020</b>	<b>June 30, 2021</b>
<b>MEMBERSHIP</b>			
Active Members	453	458	465
Retired Members and Beneficiaries	373	394	392
Disabled Members	2	2	2
Inactive Members	58	57	58
Total Members	886	911	917
Projected Annual Salaries of Active Members	\$ 57,902,162	\$ 60,109,120	\$ 62,714,587
Annual Retirement Payments for Retired Members, Disabled Members and Beneficiaries	\$ 23,793,872	\$ 26,289,294	\$ 26,877,142
<b>ASSETS AND LIABILITIES</b>			
Net Assets			
Market Value of Assets (MVA)	\$ 545,330,816	\$ 554,121,143	\$ 687,992,849
Actuarial Value of Assets (AVA)	538,600,244	564,741,115	615,754,553
Actuarial Accrued Liability (AAL)	586,499,053	592,510,151	642,171,761
Unfunded Actuarial Accrued Liability (UAAL): AAL - AVA	\$ 47,898,809	\$ 27,769,036	\$ 26,417,208
Funded Ratios			
AVA / AAL	91.83%	95.31%	95.89%
MVA / AAL	92.98%	93.52%	107.14%
<b>CONTRIBUTIONS</b>			
Normal Cost Rate	33.79%	29.89%	33.23%
UAAL Rate	8.27%	5.33%	5.04%
Total Recommended Contribution Rate	42.06%	35.22%	38.27%
Member Contribution Rate <sup>1</sup>	(6.00%)	(6.00%)	(6.00%)
Actuarially Determined Contribution Rate	36.06%	29.22%	32.27%
Estimated Contribution Amount	\$ 20,879,520	\$ 17,563,885	\$ 20,237,997

<sup>1</sup>Only active members with less than 22 years of service make contributions to the plan.



## **SECTION 2 – SCOPE OF THE REPORT**

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This report presents the actuarial valuation results of the Judges’ Retirement System as of June 30, 2021. 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, 2021.
- 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.



## SECTION 3 – ASSETS

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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, 2021. 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. Table 12 (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 2 shows the development of the actuarial value of assets (AVA) as of the valuation date.



**TABLE 1**  
**DEVELOPMENT OF MARKET VALUE OF ASSETS**

	June 30, 2020	June 30, 2021
1. Market Value of Assets, Beginning of Year	\$ 545,330,816	\$ 554,121,143
2. Receipts		
a. Member (Includes Purchased Service) <sup>1</sup>	\$ 3,548,975	\$ 4,040,801
b. Employer	18,166,479	18,620,626
c. Miscellaneous	0	(16)
d. Total	\$ 21,715,454	\$ 22,661,411
3. Expenditures		
a. Benefit Payments	\$ 26,798,518	\$ 28,812,917
b. Refund of Contributions	37,957	103,427
c. Administrative Expense	109,105	100,949
d. Total	\$ 26,945,580	\$ 29,017,293
4. Investment Return		
a. Investment Income	\$ 13,990,592	\$ 140,198,274
b. Securities Lending Income	29,861	29,314
c. Total Investment Return	\$ 14,020,453	\$ 140,227,588
5. Market Value of Assets, End of Year: (1) + (2c) - (3d) + (4c)	\$ 554,121,143	\$ 687,992,849
6. Estimated Rate of Return, Net of Expenses <sup>2</sup>	2.56%	25.43%

<sup>1</sup> Includes \$57,371 of member service purchases during fiscal year 2020 and \$366,350 of member service purchases during fiscal year 2021.

<sup>2</sup> Based on individual fund experience. Assumes cash flows occur at mid-year.



TABLE 2

## DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

		<b>For Plan Year Ending June 30, 2021</b>		
1. Market Value as of June 30, 2020				\$ 554,121,143
2. Receipts				\$ 22,661,411
3. Expenditures, Net of Administrative Expenses				\$ (28,916,344)
4. Expected Return on Assets <sup>1</sup>				\$ 37,192,073
5. Expected Market Value as of June 30, 2021: (1) + (2) + (3) + (4)				\$ 585,058,283
6. Actual Market Value as of June 30, 2021				\$ 687,992,849
7. Year End 2021 Asset Gain/(Loss): (6) - (5)				\$ 102,934,566
8. Deferred Investment Gains and Losses				
	Year Ended June 30:	Gain/(Loss)	Factor	Deferred Amount
a. 2018		\$ 12,090,206	20%	\$ 2,418,041
b. 2019		2,769,978	40%	1,107,991
c. 2020		(22,725,648)	60%	(13,635,389)
d. 2021		102,934,566	80%	82,347,653
e. Total				\$ 72,238,296
9. Initial Actuarial Value as of June 30, 2021: (6) - (8e)				\$ 615,754,553
10. Constraining Values				
a. 80% of Market Value: (6) x 0.8				\$ 550,394,279
b. 120% of Market Value: (6) x 1.2				\$ 825,591,419
11. Actuarial Value as of June 30, 2021				\$ 615,754,553
12. Actuarial Rate of Return, Net of Expenses <sup>2</sup>				10.20%
13. Actuarial Value of Assets as a Percent of Market Value: (11) / (6)				89.5%

<sup>1</sup> Assumes cash flows occur at mid-year and a return assumption of 6.75%.<sup>2</sup> Assumes cash flows occur at mid-year.



## SECTION 4 – PLAN LIABILITIES

---

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 Judges' Retirement System as of the valuation date, June 30, 2021. 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, 2021 Judges' Retirement System valuation are based on census data collected as of June 30, 2020. Standard actuarial techniques are used to adjust these results from June 30, 2020 to June 30, 2021. While these roll-forward techniques are based on the expectation that all actuarial assumptions are met during the intervening year, there will, of course, be many of the assumptions that are not 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, 2021.

### **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 perform 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 3 contains the calculation of actuarial accrued liability for the plan. The Entry Age Normal actuarial cost method is used to develop the actuarial accrued liability.





**TABLE 3**  
**ACTUARIAL ACCRUED LIABILITY**

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	<b>As of June 30, 2021</b>
1. Actuarial Accrued Liability	
a. Member Contribution Balances	\$ 41,003,415
b. Active & Inactive Members	293,098,652
c. In-pay Members	<u>308,069,694</u>
d. Total	642,171,761
2. Actuarial Value of Assets	615,754,553
3. Unfunded Actuarial Accrued Liability: (1d) – (2)	26,417,208
4. Funded Ratio: (2)/(1d)	95.89%



**SECTION 4 – PLAN LIABILITIES**

**TABLE 4**  
**SOLVENCY TEST**

Actuarial Valuation as of June 30	Actuarial Accrued Liabilities (AAL)				Actuarial Value of Assets	Portion of AAL Covered by Assets			
	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities		Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2021	\$41,003	\$308,070	\$293,099	\$642,172	\$615,755	100.0%	100.0%	91.0%	95.9%
2020	41,523	299,146	251,841	592,510	564,741	100.0	100.0	89.0	95.3
2019	38,165	269,886	278,448	586,499	538,600	100.0	100.0	82.8	91.8
2018	38,541	258,255	250,898	547,694	516,750	100.0	100.0	87.7	94.4
2017	36,385	245,177	242,173	523,735	492,013	100.0	100.0	86.9	93.9
2016	34,804	244,484	221,838	501,126	469,378	100.0	100.0	85.7	93.7
2015	32,383	210,020	226,542	468,945	447,514	100.0	100.0	90.5	95.4
2014	32,060	216,044	216,751	464,855	419,568	100.0	100.0	79.1	90.3
2013	29,060	224,132	199,918	453,110	381,240	100.0	100.0	64.1	84.1
2012	27,699	205,341	204,814	437,854	260,096	100.0	100.0	13.2	59.4

Note: All of the dollar amounts are in thousands of dollars.



TABLE 5

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

	<b>For Year Ending June 30, 2021</b>
1. Unfunded Actuarial Accrued Liability as of June 30, 2020	\$ 27,769,036
2. Normal Cost	17,969,443
3. Actuarially Determined Contribution	(21,175,239)
4. Interest	<u>1,658,019</u>
5. Expected Unfunded Actuarial Accrued Liability as of June 30, 2021	\$ 26,221,259
6. Actuarial Value of Asset Changes	
a. Investment Experience (Gain)/Loss	\$ (19,359,450)
b. Contributions (Above)/Below the Actuarially Determined Contribution and Other (Gain)/Loss	\$ (443,031)
7. Actuarial Accrued Liability Changes	
a. Actuarial Accrued Liability Experience (Gain)/Loss	\$ (6,218,534)
b. Additional Liability Due to Benefit Changes	0
c. Additional Liability Due to Assumption Changes	<u>26,216,964</u>
8. Total Experience (Gain)/Loss	\$ 195,949
9. Unfunded Actuarial Accrued Liability as of June 30, 2021: (5) + (8)	\$ 26,417,208



**TABLE 6**  
**ACTUARIAL GAIN/(LOSS)**

<b>Liabilities</b>		
1. Actuarial Accrued Liability as of June 30, 2020	\$	592,510,151
2. Normal Cost for Plan Year Ending June 30, 2021		17,969,443
3. Benefit Payments During Plan Year <sup>1</sup>		(28,916,421)
4. Service Purchases (employee and employer)		366,350
5. Interest at 6.75%		40,243,808
6. Change Due to Benefit Changes		0
7. Change Due to Assumption Changes		26,216,964
8. Expected Actuarial Accrued Liability as of June 30, 2021	\$	648,390,295
9. Actuarial Accrued Liability as of June 30, 2021	\$	642,171,761
<b>Assets</b>		
10. Actuarial Value of Assets as of June 30, 2020	\$	564,741,115
11. Receipts During Plan Year		22,661,411
12. Expenditures, Excluding Expenses, During Plan Year		(28,916,344)
13. Interest at 6.75%		37,908,921
14. Expected Actuarial Value of Assets as of June 30, 2021	\$	596,395,103
15. Actuarial Value of Assets as of June 30, 2021	\$	615,754,553
<b>Experience Gain / (Loss)</b>		
16. Liability Actuarial Experience Gain/(Loss): (8) - (9)	\$	6,218,534
17. Asset Actuarial Experience Gain/(Loss): (15) - (14)		19,359,450
18. Total Actuarial Experience Gain/(Loss): (16) + (17)	\$	25,577,984

<sup>1</sup> Does not include miscellaneous expenses or benefit overpayments.



**TABLE 7**  
**EXPERIENCE GAIN/(LOSS) ANALYSIS BY SOURCE**

<b>Liability Sources (in thousands)</b>		<b>Gain/(Loss)</b>
Retirement	\$	7,163
Termination		(336)
Disability		682
Mortality		2,713
Salary		(3,807)
New Entrants/Rehires		(1,181)
Miscellaneous/COLA		985
Total Liability Experience Gain/(Loss)	\$	6,219
as a % of AAL		1.0%
Asset Experience Gain/(Loss)	\$	19,359
Total Actuarial Experience Gain/(Loss)	\$	25,578



**TABLE 8**  
**PROJECTED BENEFIT PAYMENTS**

<u>Plan Year Ending June 30</u>	<u>Benefit Amount</u>
2022	\$ 33,788,410
2023	36,240,699
2024	38,516,609
2025	40,648,778
2026	42,805,941
2027	44,620,609
2028	46,441,198
2029	48,268,743
2030	49,981,033
2031	51,576,150
2032	53,312,611
2033	54,968,988
2034	56,726,515
2035	58,137,757
2036	59,376,049
2037	60,653,235
2038	61,808,672
2039	62,472,440
2040	63,071,275
2041	63,294,966
2042	63,196,486
2043	62,999,961
2044	62,622,677
2045	61,912,705
2046	61,179,671
2047	60,270,402
2048	59,054,632
2049	57,718,846
2050	56,211,157
2051	54,609,886

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



## SECTION 5 – EMPLOYER CONTRIBUTIONS

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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 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 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. The unfunded actuarial accrued liability is calculated each year and reflects experience gains and losses.

The INPRS Board of Trustees has established a funding policy of requesting appropriations from the State in an amount equal to the actuarially determined contribution. Based on the June 30, 2020 actuarial valuation, the Board requested appropriations from the State for fiscal years 2022 and 2023. This June 30, 2021 valuation will not be directly used for determining contributions. Due to the biennial cycle used to set appropriations, the contribution amount for the plan years ending June 30, 2024 and June 30, 2025 will rely on the most up-to-date plan status at that time, which is the June 30, 2022 valuation.

### Contribution Summary

In Table 9, the amortization payment related to the unfunded actuarial accrued liability/(surplus), as of June 30, 2021, is developed. Table 10 develops the actuarial 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 11 the contribution rates under alternative discount rates are provided to illustrate the sensitivity of the contribution requirements to the selection of the investment return assumption.

**SECTION 5 – EMPLOYER CONTRIBUTIONS****TABLE 9****SCHEDULE OF AMORTIZATION BASES**

<b>Amortization Bases</b>	<b>Original Amount <sup>1</sup></b>	<b>June 30, 2021 Remaining Payments</b>	<b>Date of Last Payment</b>	<b>Outstanding Balance as of June 30, 2021</b>	<b>Annual Contribution</b>
2009 UAAL Base	40,281,829	15	7/1/2036	30,365,850	2,990,893
2010 UAAL Base	15,151,518	19	7/1/2040	12,538,476	1,078,373
2011 UAAL Base	14,155,565	20	7/1/2041	12,015,476	1,006,046
2012 UAAL Base	12,754,451	21	7/1/2042	11,080,411	905,209
2013 UAAL Base	(6,981,734)	22	7/1/2043	(6,195,725)	(494,839)
2014 UAAL Base	(25,396,685)	23	7/1/2044	(22,981,723)	(1,797,671)
2015 UAAL Base	(22,870,686)	24	7/1/2045	(21,070,648)	(1,616,820)
2016 UAAL Base	11,116,546	15	7/1/2036	9,522,049	937,877
2017 UAAL Base	1,104,859	16	7/1/2037	982,350	93,065
2018 UAAL Base	458,415	17	7/1/2038	421,562	38,553
2019 UAAL Base	18,284,577	18	7/1/2039	17,336,972	1,535,411
2020 UAAL Base	(18,251,291)	19	7/1/2040	(17,793,791)	(1,530,356)
2021 UAAL Base	195,949	20	7/1/2041	195,949	16,407
<b>Total</b>				<b>\$ 26,417,208</b>	<b>\$ 3,162,148</b>
1. Total UAAL Amortization Payments					\$ 3,162,148
2. Projected Payroll for FY 2022, Under 22 Years of Service					\$ 62,714,587
3. UAAL Amortization Payment Rate					5.04%
4. Remaining Amortization Period in Years (Weighted) <sup>2</sup>					9.0

<sup>1</sup> The original amounts from 2017 to 2013 were provided by the prior actuary. Amounts prior to that were estimated by INPRS.

<sup>2</sup> The weighted average remaining UAAL amortization period is calculated by weighting the remaining amortization period of each base by the amortization amount of each base.





TABLE 10

ACTUARIALLY DETERMINED CONTRIBUTION RATE

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1. Projected Covered Payroll for FY 2022	\$ 62,714,587
2. Normal Cost as of June 30, 2020	
a. Dollar Amount	\$ 20,837,708
b. Percent of Total Pay	29.11%
c. Percent of Covered Pay <sup>1</sup>	33.23%
3. Amortization of UAAL as of June 30, 2020	
a. Dollar Amount	\$ 3,162,148
b. Percent of Covered Pay <sup>1</sup>	5.04%
4. Total Recommended Contribution Rate: (2c) + (3b)	38.27%
5. Expected Employee Contributions	
a. Dollar Amount	\$ 3,762,875
b. Percent of Covered Pay <sup>1</sup>	6.00%
6. Actuarially Determined Contribution Rate: (4) - (5)	32.27%
7. Estimated Actuarially Determined Contribution Amount <sup>2</sup> : (1) x (6)	\$ 20,237,997
8. Expected Appropriations and Court Fees for FY 2022	\$ 17,563,885
9. Expected Percentage of Actuarially Determined Contribution Contributed	86.79%

<sup>1</sup> Active members with less than 22 years of service make 6% contributions.

<sup>2</sup> Due to the biennial appropriations cycle, this will not directly impact the funding of the plan. Next year, this will be used to assist with the determination of the FY 2024 and FY 2025 approved funding amounts.



**SECTION 5 – EMPLOYER CONTRIBUTIONS**

**TABLE 11  
INVESTMENT RETURN SENSITIVITY**

	<b>1.00% Decrease: (5.25%)</b>	<b>0.75% Decrease: (5.50%)</b>	<b>0.50% Decrease: (5.75%)</b>	<b>0.25% Decrease: (6.00%)</b>	<b>Current Assumption: (6.25%)</b>
<b>Funded Status</b>					
Actuarial Accrued Liability	\$718,229,383	\$697,916,380	\$678,501,462	\$659,935,316	\$642,171,761
Actuarial Value of Assets	<u>615,754,553</u>	<u>615,754,553</u>	<u>615,754,553</u>	<u>615,754,553</u>	<u>615,754,553</u>
Unfunded Actuarial Accrued Liability	\$102,474,830	\$82,161,827	\$62,746,909	\$44,180,763	\$26,417,208
Funded Ratio	85.7%	88.2%	90.8%	93.3%	95.9%
<b>Actuarially Determined Contribution Amount</b>					
Normal Cost	\$25,775,318	\$24,420,581	\$23,149,894	\$21,957,406	\$20,837,708
UAAL Amortization	8,963,534	7,492,985	6,036,343	4,592,936	3,162,148
Expected Member Contributions	<u>(3,762,875)</u>	<u>(3,762,875)</u>	<u>(3,762,875)</u>	<u>(3,762,875)</u>	<u>(3,762,875)</u>
Actuarially Determined Contribution Amount	\$30,975,977	\$28,150,690	\$25,423,362	\$22,787,467	\$20,236,981
Actuarially Determined Contribution Rate	49.39%	44.89%	40.54%	36.34%	32.27%
	<b>0.25% Increase: (6.50%)</b>	<b>0.50% Increase: (6.75%)</b>	<b>0.75% Increase: (7.00%)</b>	<b>1.00% Increase: (7.25%)</b>	<b>1.25% Increase: (7.50%)</b>
<b>Funded Status</b>					
Actuarial Accrued Liability	\$625,167,533	\$608,882,065	\$593,277,317	\$578,317,578	\$563,969,327
Actuarial Value of Assets	<u>615,754,553</u>	<u>615,754,553</u>	<u>615,754,553</u>	<u>615,754,553</u>	<u>615,754,553</u>
Unfunded Actuarial Accrued Liability	\$9,412,980	(\$6,872,488)	(\$22,477,236)	(\$37,436,975)	(\$51,785,226)
Funded Ratio	98.5%	101.1%	103.8%	106.5%	109.2%
<b>Actuarially Determined Contribution Amount</b>					
Normal Cost	\$19,785,804	\$18,797,070	\$17,867,231	\$16,992,329	\$16,168,696
UAAL Amortization	1,743,391	(505,842)	(1,692,859)	(2,883,943)	(4,078,808)
Expected Member Contributions	<u>(3,762,875)</u>	<u>(3,762,875)</u>	<u>(3,762,875)</u>	<u>(3,762,875)</u>	<u>(3,762,875)</u>
Actuarially Determined Contribution Amount	\$17,766,320	\$14,528,352	\$12,411,497	\$10,345,510	\$8,327,013
Actuarially Determined Contribution Rate	28.33%	23.17%	19.79%	16.50%	13.28%



## **SECTION 6 – GASB INFORMATION**

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### **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 12**  
**STATEMENT OF FIDUCIARY NET POSITION**

	<b>June 30, 2021</b>
<b>1. Assets</b>	
a. Cash	\$ 0
b. Receivables	
i. Contributions and Miscellaneous Receivables	\$ 3,602,771
ii. Investments Receivable	5,296,908
iii. Foreign Exchange Contracts Receivable	121,350,508
iv. Interest and Dividends	1,416,658
v. Receivables Due From Other Funds	0
vi. Total Receivables	\$ 131,666,845
c. Investments	
i. Short-Term Investments	\$ 0
ii. Pooled Repurchase Agreements	6,041,314
iii. Pooled Short-Term Investments	42,443,442
iv. Pooled Fixed Income	208,283,733
v. Pooled Equity	145,467,595
vi. Pooled Alternative Investments	313,989,034
vii. Pooled Derivatives	1,844,717
viii. Pooled Investments	0
ix. Securities Lending Collateral	3,535,287
x. Total Investments	\$ 721,605,122
d. Net Capital Assets	0
e. Other Assets	0
f. Total Assets: a + b(vi) + c(x) + d + e	\$ 853,271,967
<b>2. Liabilities</b>	
a. Administrative Payable	\$ 3,929
b. Retirement Benefits Payable	0
c. Investments Payable	33,034,080
d. Foreign Exchange Contracts Payable	120,466,245
e. Securities Lending Obligations	3,535,287
f. Securities Sold Under Agreement to Repurchase	8,228,306
g. Due To Other Funds	11,271
h. Due to Other Governments	0
i. Total Liabilities: a + b + c + d + e + f + g + h	\$ 165,279,118
<b>3. Fiduciary Net Position Restricted for Pensions: (1)(f) - (2)(i)</b>	<b>\$ 687,992,849</b>



TABLE 13

## STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

	For Fiscal Year Ending June 30, 2021	
<b>1. Fiduciary Net Position as of June 30, 2020</b>	<b>\$</b>	<b>554,121,143</b>
<b>2. Additions</b>		
a. Contributions		
i. Member Contributions	\$	3,674,451
ii. Employer Contributions		18,620,626
iii. Service Purchases (Employer and Member) <sup>1</sup>		366,350
iv. Non-Employer Contributing Entity Contributions		0
v. Total Contributions	\$	22,661,427
b. Investment Income/(Loss)		
i. Net Appreciation/(Depreciation)	\$	137,091,942
ii. Net Interest and Dividend Income		7,617,990
iii. Securities Lending Income		36,969
iv. Other Net Investment Income		38,876
v. Investment Management Expenses		(4,462,909)
vi. Direct Investment Expenses		(87,625)
vii. Securities Lending Expenses		(7,655)
viii. Total Investment Income/(Loss)	\$	140,227,588
c. Other Additions		
i. Member Reassignments		0
ii. Miscellaneous Receipts		(16)
iii. Total Other Additions	\$	(16)
d. Total Revenue (Additions): a(v) + b(viii) + c(iii)	\$	162,888,999
<b>3. Deductions</b>		
a. Pension, Survivor and Disability Benefits	\$	28,812,917
b. Death and Funeral Benefits		0
c. Distributions of Contributions and Interest		103,427
d. Administrative Expenses		100,949
e. Member Reassignments		0
f. Miscellaneous Expenses		0
g. Total Expenses (Deductions)	\$	29,017,293
<b>4. Net Increase (Decrease) in Fiduciary Net Position: (2)(d) - (3)(g)</b>	<b>\$</b>	<b>133,871,706</b>
<b>5. Fiduciary Net Position as of June 30, 2021: (1) + (4)</b>	<b>\$</b>	<b>687,992,849</b>

<sup>1</sup> Service purchases paid by employer of \$0 and employee of \$366,350.



TABLE 14

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY

	For Fiscal Year Ending June 30, 2021		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
<b>1. Balance at June 30, 2020</b>	\$ 592,510,151	\$ 554,121,143	\$ 38,389,008
<b>2. Changes for the Year:</b>			
Service Cost (SC) <sup>1</sup>	17,969,443		17,969,443
Interest Cost	40,243,810		40,243,810
Experience (Gains)/Losses	(6,218,613)		(6,218,613)
Assumption Changes	26,216,964		26,216,964
Plan Amendments	0		0
Benefit Payments <sup>2</sup>	(28,916,344)	(28,916,344)	0
Service Purchases			
Employer Contributions	0	0	0
Employee Contributions	366,350	366,350	0
Member Reassignments	0	0	0
Employer Contributions <sup>3</sup>		18,620,626	(18,620,626)
Non-employer Contributions		0	0
Employee Contributions		3,674,451	(3,674,451)
Net Investment Income		140,227,588	(140,227,588)
Administrative Expenses		(100,949)	100,949
Other		(16)	16
Net Changes	\$ 49,661,610	\$ 133,871,706	\$ (84,210,096)
<b>3. Balance at June 30, 2021</b>	\$ 642,171,761	\$ 687,992,849	\$ (45,821,088)

<sup>1</sup> Service cost provided as of beginning of year. Interest to end of year is included in the interest cost.

<sup>2</sup> Includes refund of member contributions of \$103,427.

<sup>3</sup> Includes \$11,467,437 of state appropriations to the fund.



**TABLE 15**  
**DEFERRED OUTFLOWS OF RESOURCES**

	June 30, 2020	Remaining Period	Recognition	June 30, 2021
<b>1. Liability Experience</b>				
June 30, 2021 Loss	\$ 0	4.17	\$ 0	\$ 0
June 30, 2020 Loss	0	3.27	0	0
June 30, 2019 Loss	3,451,529	1.36	2,537,890	913,639
June 30, 2018 Loss	0	0.38	0	0
June 30, 2017 Loss	0	0.00	0	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
<b>2. Assumption Changes</b>				
June 30, 2021 Loss	\$ 26,216,964	4.17	\$ 6,287,042	\$ 19,929,922
June 30, 2020 Loss	0	3.27	0	0
June 30, 2019 Loss	0	1.36	0	0
June 30, 2018 Loss	0	0.38	0	0
June 30, 2017 Loss	0	0.00	0	0
June 30, 2016 Loss	0	0.00	0	0
June 30, 2015 Loss	0	0.00	0	0
<b>3. Investment Experience</b>				
June 30, 2021 Loss	\$ 0	5.00	\$ 0	\$ 0
June 30, 2020 Loss	18,090,288	4.00	4,522,572	13,567,716
June 30, 2019 Loss	0	3.00	0	0
June 30, 2018 Loss	0	2.00	0	0
June 30, 2017 Loss	0	1.00	0	0
<b>Total Outflows:</b>				
<b>(1)+(2)+(3)</b>	<b>\$ 47,758,781</b>		<b>\$ 13,347,504</b>	<b>\$ 34,411,277</b>

Information was provided prospectively from June 30, 2013 for GASB No. 68 purposes. 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 16**  
**DEFERRED INFLOWS OF RESOURCES**

	June 30, 2020	Remaining Period	Recognition	June 30, 2021
<b>1. Liability Experience</b>				
June 30, 2021 Gain	\$ 6,218,613	4.17	\$ 1,491,275	\$ 4,727,338
June 30, 2020 Gain	1,507,139	3.27	460,900	1,046,239
June 30, 2019 Gain	0	1.36	0	0
June 30, 2018 Gain	347,422	0.38	347,422	0
June 30, 2017 Gain	0	0.00	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
<b>2. Assumption Changes</b>				
June 30, 2021 Gain	\$ 0	4.17	\$ 0	\$ 0
June 30, 2020 Gain	19,002,974	3.27	5,811,308	13,191,666
June 30, 2019 Gain	0	1.36	0	0
June 30, 2018 Gain	0	0.38	0	0
June 30, 2017 Gain	0	0.00	0	0
June 30, 2016 Gain	0	0.00	0	0
June 30, 2015 Gain	0	0.00	0	0
<b>3. Investment Experience</b>				
June 30, 2021 Gain	\$ 103,038,922	5.00	\$ 20,607,785	\$ 82,431,137
June 30, 2020 Gain	0	4.00	0	0
June 30, 2019 Gain	1,728,852	3.00	576,285	1,152,567
June 30, 2018 Gain	4,885,338	2.00	2,442,670	2,442,668
June 30, 2017 Gain	1,087,208	1.00	1,087,208	0
<b>Total Inflows:</b>				
<b>(1)+(2)+(3)</b>	<b>\$ 137,816,468</b>		<b>\$ 32,824,853</b>	<b>\$ 104,991,615</b>

Information was provided prospectively from June 30, 2013 for GASB No. 68 purposes. 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 17

**DEFERRED INFLOWS / OUTFLOWS TO BE RECOGNIZED IN PENSION EXPENSE**

<b>Fiscal Year Ending June 30</b>	<b>Deferred Outflows</b>	<b>Deferred Inflows</b>	<b>Net Deferred Outflows/(Inflows)</b>
Current Year:			
2021	\$ 13,347,504	\$ 32,824,853	\$ (19,477,349)
Future Years:			
2022	\$ 11,723,253	\$ 31,390,221	\$ (19,666,968)
2023	10,809,614	28,947,550	(18,137,936)
2024	10,809,614	23,792,549	(12,982,935)
2025	1,068,796	20,861,295	(19,792,499)
2026	0	0	0
Thereafter	0	0	0



**TABLE 18**  
**PENSION EXPENSE UNDER GASB NO. 68**

		<b>For Fiscal Year Ending June 30, 2021</b>
1. Service Cost, beginning of year	\$	17,969,443
2. Interest Cost, including interest on service cost		40,243,810
3. Member Contributions <sup>1</sup>		(3,674,451)
4. Administrative Expenses		100,949
5. Expected Return on Assets <sup>2</sup>		(37,188,666)
6. Plan Amendments		0
7. Recognition of Deferred Inflows / Outflows of Resources Related to:		
a. Liability Experience (Gains) / Losses	238,293	
b. Assumption Change (Gains) / Losses	475,734	
c. Investment Experience (Gains) / Losses	<u>(20,191,376)</u>	
d. Total: (7a)+(7b)+(7c)		(19,477,349)
8. Miscellaneous (Income) / Expense		16
9. Total Collective Pension Expense: (1)+(2)+(3)+(4)+(5)+(6)+(7d)+(8)		(2,026,248)
10. Employer Service Purchases		0
<b>Pension Expense / (Income): (9) + (10)</b>	<b>\$</b>	<b>(2,026,248)</b>

<sup>1</sup> Excludes member paid service purchases of \$366,350.

<sup>2</sup> 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 Judges' Retirement System is a single-employer plan for GASB accounting purposes.
Measurement Date	June 30, 2021
Valuation Date	
Assets:	June 30, 2021
Liabilities:	June 30, 2020 – The TPL as of June 30, 2021 was determined based on an actuarial valuation prepared as of June 30, 2020 rolled forward one year to June 30, 2021, 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% per year beginning July 1, 2022. Actual salary increases on July 1, 2020 (3.3%) and July 1, 2021 (2.45%) are reflected in the liability valuation at June 30, 2021.
Cost-of-Living Increases	As of June 30, 2021: 2.65% compounded annually, beginning July 1, 2022. Actual COLA increases at July 1, 2020 (3.3%) and July 1, 2021 (2.45%) are reflected in the valuation.  As of June 30, 2020: 2.75% compounded annually, beginning July 1, 2021. Actual COLA increases at July 1, 2019 (2.7%) and July 1, 2020 (3.3%) are reflected in the valuation.



## SECTION 6 – GASB INFORMATION

---

Mortality Assumption	<p>Pub-2010 Public Retirement Plans Mortality Tables (Amount-Weighted) with a fully generational projection of mortality improvements using SOA Scale MP-2019.</p> <p><i>Healthy Employees</i> – General Employee table with a 1 year setback for males and a 1 year setback for females.</p> <p><i>Retirees</i> – General Retiree table with a 1 year setback for males and a 1 year setback for females.</p> <p><i>Beneficiaries</i> – Contingent Survivor table with no set forward for males and a 2 year set forward for females.</p> <p><i>Disableds</i> – General Disabled table with a 140% load.</p>
Experience Study	<p>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.</p>
Discount Rate	<p>6.25%, net of investment expenses</p> <p>The discount rate is equal to the expected long-term rate of return on plan investments, net of investment expense and including price inflation. The discount rate decreased from the 6.75% used on the prior measurement date.</p> <p>The INPRS Board of Trustees has established a funding policy of requesting appropriations from the State in an amount equal to the actuarially determined contribution, 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, 2021 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.</p>



## SECTION 6 – GASB INFORMATION

### Discount Rate Sensitivity

	1% Decrease 5.25%	Current Rate 6.25%	1% Increase 7.25%
Net Pension Liability	\$30,236,534	(\$45,821,088)	(\$109,675,271)

### Classes of Plan Members Covered

The June 30, 2021 valuation was performed using census data provided by INPRS as of June 30, 2020. Standard actuarial techniques were used to roll forward the total pension liability computed as of June 30, 2020 to the June 30, 2021 measurement date using actual benefit payments during that period of time.

Number as of June 30, 2020	
1. Currently Receiving Benefits:	
Retired Members, Disabled Members, and Beneficiaries	394
2. Inactive Members Entitled To But Not Yet Receiving Benefits	24
3. Inactive Non-vested Members Entitled to a Refund of Member Contributions	34
4. Active Members	465
Total Covered Plan Members: (1)+(2)+(3)+(4)	917

### 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, 2021, the money-weighted return on the plan assets is 25.5%.

### Components of Net Pension Liability

As of June 30, 2021	
Total Pension Liability	\$ 642,171,761
Fiduciary Net Position	687,992,849
Net Pension Liability	\$ (45,821,088)
Ratio of Fiduciary Net Position to Total Pension Liability	107.14%



SECTION 6 – GASB INFORMATION

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	2017	2018	2019	2020	2021
<b>Total Pension Liability</b>					
Total Pension Liability - beginning	\$501,125,713	\$523,735,050	\$547,694,452	\$586,499,053	\$592,510,151
Service Cost (SC), beginning-of-year	14,762,102	14,885,621	18,229,583	19,566,868	17,969,443
Interest Cost, including interest on SC	34,082,760	35,567,044	37,346,053	40,005,655	40,243,810
Experience (Gains)/Losses	(3,106,524)	(3,090,250)	8,527,309	(1,968,039)	(6,218,613)
Assumption Changes	(1,212,930)	0	0	(24,814,282)	26,216,964
Plan Amendments	0	0	0	0	0
Actual Benefit Payments	(22,099,240)	(23,622,253)	(25,391,127)	(26,836,475)	(28,916,344)
Member Reassignments	0	0	0	0	0
Service Purchases	183,169	219,240	92,783	57,371	366,350
Net Change in Total Pension Liability	22,609,337	23,959,402	38,804,601	6,011,098	49,661,610
<b>(a) Total Pension Liability - ending</b>	<b>\$523,735,050</b>	<b>\$547,694,452</b>	<b>\$586,499,053</b>	<b>\$592,510,151</b>	<b>\$642,171,761</b>
<b>Plan Fiduciary Net Position</b>					
Plan Fiduciary Net Position – beginning	\$441,790,144	\$475,054,556	\$513,952,408	\$545,330,816	\$554,121,143
Contributions – employer	16,823,600	15,117,494	16,030,805	18,166,479	18,620,626
Contributions – non-employer	0	0	0	0	0
Contributions – member	3,467,843	3,417,904	3,475,575	3,548,975	4,040,801
Net investment income	35,195,878	44,103,829	37,370,961	14,020,453	140,227,588
Actual benefit payments	(22,099,240)	(23,622,253)	(25,391,127)	(26,836,475)	(28,916,344)
Net member reassignments	0	0	0	0	0
Administrative expense	(123,669)	(119,122)	(107,806)	(109,105)	(100,949)
Other	0	0	0	0	(16)
Net change in Plan Fiduciary Net Position	33,264,412	38,897,852	31,378,408	8,790,327	133,871,706
<b>(b) Plan Fiduciary Net Position - ending</b>	<b>\$475,054,556</b>	<b>\$513,952,408</b>	<b>\$545,330,816</b>	<b>\$554,121,143</b>	<b>\$687,992,849</b>
<b>Net Pension Liability - ending, (a) - (b)</b>	<b>\$48,680,494</b>	<b>\$33,742,044</b>	<b>\$41,168,237</b>	<b>\$38,389,008</b>	<b>(\$45,821,088)</b>

Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.



SECTION 6 – GASB INFORMATION

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

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

Table with 5 columns: Fiscal Year Ending June 30, 2013, 2014, 2015, 2016. Rows include Total Pension Liability, Plan Fiduciary Net Position, and Net Pension Liability - ending.

Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.



SECTION 6 – GASB INFORMATION

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

SCHEDULE OF THE NET PENSION LIABILITY

Fiscal Year Ending June 30	2017	2018	2019	2020	2021
Total Pension Liability	\$523,735,050	\$547,694,452	\$586,499,053	\$592,510,151	\$642,171,761
Plan Fiduciary Net Position	<u>475,054,556</u>	<u>513,952,408</u>	<u>545,330,816</u>	<u>554,121,143</u>	<u>687,992,849</u>
Net Pension Liability	\$48,680,494	\$33,742,044	\$41,168,237	\$38,389,008	(\$45,821,088)
Ratio of Plan Fiduciary Net Position to Total Pension Liability	90.71%	93.84%	92.98%	93.52%	107.14%
Covered-employee payroll <sup>1</sup>	\$54,755,206	\$53,350,037	\$56,379,905	\$58,188,887	\$61,214,824
Net Pension Liability as a percentage of covered-employee payroll	88.91%	63.25%	73.02%	65.97%	-74.85%

Fiscal Year Ending June 30	2013	2014	2015	2016
Total Pension Liability	\$453,109,893	\$464,854,573	\$468,944,751	\$501,125,713
Plan Fiduciary Net Position	<u>375,752,562</u>	<u>432,729,729</u>	<u>437,352,498</u>	<u>441,790,144</u>
Net Pension Liability	\$77,357,331	\$32,124,844	\$31,592,253	\$59,335,569
Ratio of Plan Fiduciary Net Position to Total Pension Liability	82.93%	93.09%	93.26%	88.16%
Covered-employee payroll <sup>1</sup>	\$47,594,849	\$46,041,085	\$48,582,165	\$51,381,964
Net Pension Liability as a percentage of covered-employee payroll	162.53%	69.77%	65.03%	115.48%

<sup>1</sup> As provided by INPRS.

Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.





SECTION 6 – GASB INFORMATION

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

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ending June 30	2017	2018	2019	2020	2021
Actuarially Determined Contribution <sup>1</sup>	\$14,334,913	\$14,852,650	\$14,861,743	\$19,405,994	\$22,074,066
Actual employer contributions	<u>\$16,823,600</u>	<u>\$15,117,494</u>	<u>\$16,030,805</u>	<u>\$18,166,479</u>	<u>\$18,620,626</u>
Annual contribution (deficiency) / excess	\$2,488,687	\$264,844	\$1,169,062	(\$1,239,515)	(\$3,453,440)
Covered-employee payroll <sup>2</sup>	\$54,755,206	\$53,350,037	\$56,379,905	\$58,188,887	\$61,214,824
Actual contributions as a percentage of covered-employee payroll	30.73%	28.34%	28.43%	31.22%	30.42%

Fiscal Year Ending June 30	2013	2014	2015	2016
Actuarially Determined Contribution <sup>1</sup>	\$25,458,485	\$27,647,672	\$18,864,455	\$17,485,282
Actual employer contributions	<u>\$111,417,613</u>	<u>\$20,894,700</u>	<u>\$21,020,000</u>	<u>\$16,946,301</u>
Annual contribution (deficiency) / excess	\$85,959,128	(\$6,752,972)	\$2,155,545	(\$538,981)
Covered-employee payroll <sup>2</sup>	\$47,594,849	\$46,041,085	\$48,582,165	\$51,381,964
Actual contributions as a percentage of covered-employee payroll	234.10%	45.38%	43.27%	32.98%

<sup>1</sup> Actuarially determined contribution rate was developed in the actuarial funding valuation completed one year prior to the fiscal year. This rate was applied to the actual covered employee payroll for the fiscal year to determine the contribution amount.

<sup>2</sup> As provided by INPRS.

Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. 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**

<u>For Fiscal Year Ending June 30</u>	<u>Money-Weighted Return</u>
2021	25.5%
2020	2.6%
2019	7.3%
2018	9.3%
2017	8.0%
2016	1.2%
2015	(0.1%)
2014	13.7%
2013	5.2%

Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Results were provided by INPRS.



**APPENDIX TABLE OF CONTENTS**

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<b><u>Appendix</u></b>	<b><u>Page</u></b>
<b>Appendix A – Membership Data</b> .....	39
<i>Schedules of valuation data classified by various categories of members.</i>	
<b>Appendix B – Summary of Plan Provisions</b> .....	47
<i>A summary of the current benefit structure, as determined by the provisions of governing law on June 30, 2021.</i>	
<b>Appendix C – Summary of Actuarial Methods and Assumptions</b> .....	51
<i>A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.</i>	
<b>Appendix D – Glossary of Actuarial Terms</b> .....	56
<i>A glossary of actuarial terms used in the valuation report.</i>	



APPENDIX A – MEMBERSHIP DATA

MEMBER DATA RECONCILIATION
For June 30, 2020 Data used in the June 30, 2021 Valuation

Table with 8 columns: Active Members, Inactive Vested, Inactive Nonvested, Disabled, Retired, Beneficiary, Total. Rows include: 1. As of June 30, 2019; 2. Data Adjustments (New Participants, Rehires, Terminations, Disability, Retirements, Refund / Benefits Ended, Deaths); 3. As of June 30, 2020.

1 The valuation results were calculated using the prior year's census data and were adjusted for certain activity during fiscal year.

**APPENDIX A – MEMBERSHIP DATA****SUMMARY OF MEMBERSHIP DATA**

<b>Valuation Date</b>	<b>June 30, 2020</b>	<b>June 30, 2021</b>	<b>% Change</b>
Date of Membership Data <sup>1</sup>	July 1, 2019	July 1, 2020	
<b>ACTIVE MEMBERS</b>			
Number of Active Members	458	465	1.5%
Annual Membership Data Salary <sup>2</sup>	\$ 65,582,237	\$ 69,165,378	5.5%
Anticipated Covered Pay for Next Fiscal Year <sup>3</sup>	\$ 60,109,120	\$ 62,714,587	4.3%
Active Member Averages			
Age	55.6	56.1	0.9%
Service	9.7	10.1	4.1%
Annual Membership Data Salary	\$ 143,193	\$ 148,743	3.9%
<b>INACTIVE MEMBERS</b>			
Number of Members			
Inactive Vested	24	24	0.0%
Inactive Non-Vested	33	34	3.0%
Total	57	58	1.8%
Inactive Vested Member Averages			
Age	58.3	58.5	0.3%
Service	12.7	12.0	(5.5%)
<b>RETIREES, DISABLEDS, AND BENEFICIARIES</b>			
Number of Members			
Retired	290	288	(0.7%)
Disabled	2	2	0.0%
Beneficiaries	104	104	0.0%
Total	396	394	(0.5%)
Annual Benefits			
Retired	\$ 23,044,992	\$ 23,513,685	2.0%
Disabled	138,298	142,032	2.7%
Beneficiaries	3,106,004	3,221,425	3.7%
Total	\$ 26,289,294	\$ 26,877,142	2.2%

<sup>1</sup>The valuation results were calculated using the prior year's census data and were adjusted for certain activity during fiscal year.

<sup>2</sup> Annualized for actives with less than a year of service. Actives with no salary provided are defaulted to the state provided salary for their job title.

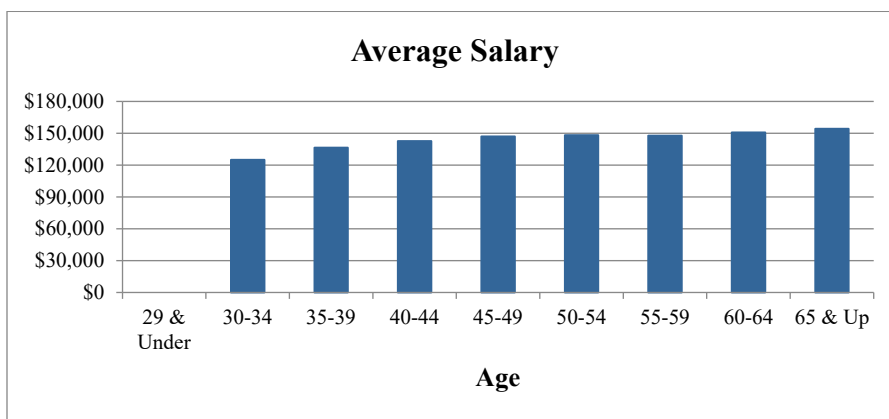
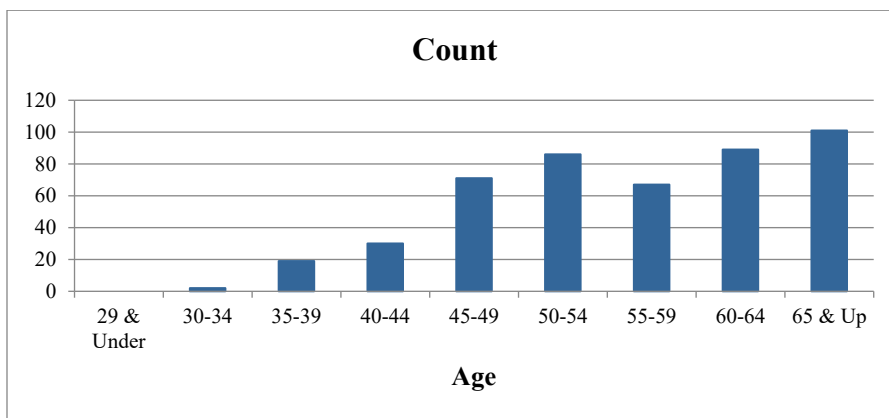
<sup>3</sup> Actual pay for contributing members with less than 22 years of service for the fiscal year ending on the valuation date, rolled forward at the known pay increase of 2.45%.



**APPENDIX A – MEMBERSHIP DATA**

**ACTIVE MEMBERS  
As of June 30, 2020 for the June 30, 2021 Valuation**

<u>Age</u>	<u>Count of Members</u>			<u>FY 2020 Annual Membership Data Salary</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
29 & Under	0	0	0	0	0	0
30-34	0	2	2	0	249,800	249,800
35-39	10	9	19	1,373,900	1,217,775	2,591,675
40-44	18	12	30	2,560,450	1,717,375	4,277,825
45-49	41	30	71	6,120,100	4,309,050	10,429,150
50-54	51	35	86	7,583,112	5,152,125	12,735,237
55-59	48	19	67	7,214,349	2,685,350	9,899,699
60-64	60	29	89	9,230,285	4,180,274	13,410,559
65 & Up	<u>75</u>	<u>26</u>	<u>101</u>	<u>11,566,223</u>	<u>4,005,210</u>	<u>15,571,433</u>
Total	303	162	465	\$ 45,648,419	\$ 23,516,959	\$ 69,165,378





**APPENDIX A – MEMBERSHIP DATA**

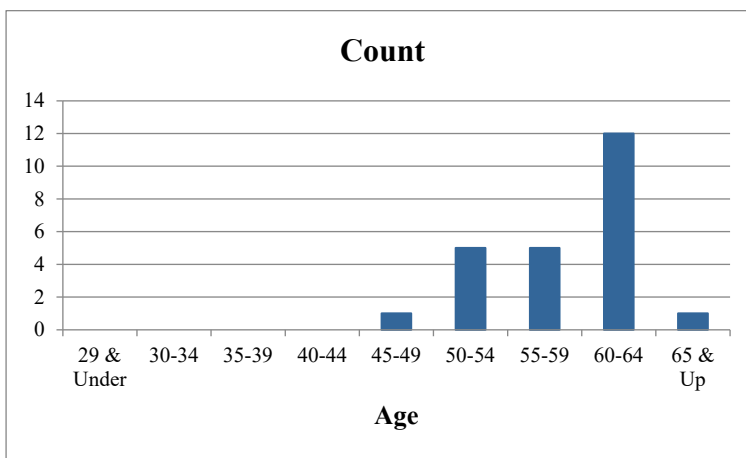
**AGE AND SERVICE DISTRIBUTION  
As of June 30, 2020 for the June 30, 2021 Valuation**

Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
<b>29 &amp; Under</b>	Number	0	0	0	0	0	0	0	0	0
	Total Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
	Average Sal.	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>30-34</b>	Number	2	0	0	0	0	0	0	0	2
	Total Salary	\$ 249,800	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 249,800
	Average Sal.	\$ 124,900	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 124,900
<b>35-39</b>	Number	14	5	0	0	0	0	0	0	19
	Total Salary	\$ 1,935,950	\$ 655,725	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,591,675
	Average Sal.	\$ 138,282	\$ 131,145	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 136,404
<b>40-44</b>	Number	16	11	3	0	0	0	0	0	30
	Total Salary	\$ 2,216,975	\$ 1,623,700	\$ 437,150	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,277,825
	Average Sal.	\$ 138,561	\$ 147,609	\$ 145,717	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 142,594
<b>45-49</b>	Number	26	35	8	2	0	0	0	0	71
	Total Salary	\$ 3,809,450	\$ 5,089,675	\$ 1,217,775	\$ 312,250	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,429,150
	Average Sal.	\$ 146,517	\$ 145,419	\$ 152,222	\$ 156,125	\$ 0	\$ 0	\$ 0	\$ 0	\$ 146,889
<b>50-54</b>	Number	25	33	19	8	1	0	0	0	86
	Total Salary	\$ 3,622,100	\$ 4,839,875	\$ 2,930,587	\$ 1,186,550	\$ 156,125	\$ 0	\$ 0	\$ 0	\$ 12,735,237
	Average Sal.	\$ 144,884	\$ 146,663	\$ 154,241	\$ 148,319	\$ 156,125	\$ 0	\$ 0	\$ 0	\$ 148,084
<b>55-59</b>	Number	17	21	11	13	5	0	0	0	67
	Total Salary	\$ 2,467,462	\$ 2,998,287	\$ 1,686,150	\$ 1,967,175	\$ 780,625	\$ 0	\$ 0	\$ 0	\$ 9,899,699
	Average Sal.	\$ 145,145	\$ 142,776	\$ 153,286	\$ 151,321	\$ 156,125	\$ 0	\$ 0	\$ 0	\$ 147,757
<b>60-64</b>	Number	14	24	15	16	20	0	0	0	89
	Total Salary	\$ 1,967,175	\$ 3,434,750	\$ 2,248,200	\$ 2,494,124	\$ 3,266,310	\$ 0	\$ 0	\$ 0	\$ 13,410,559
	Average Sal.	\$ 140,513	\$ 143,115	\$ 149,880	\$ 155,883	\$ 163,316	\$ 0	\$ 0	\$ 0	\$ 150,680
<b>65 &amp; Up</b>	Number	6	17	22	17	39	0	0	0	101
	Total Salary	\$ 874,300	\$ 2,524,662	\$ 3,341,075	\$ 2,560,450	\$ 6,270,946	\$ 0	\$ 0	\$ 0	\$ 15,571,433
	Average Sal.	\$ 145,717	\$ 148,510	\$ 151,867	\$ 150,615	\$ 160,793	\$ 0	\$ 0	\$ 0	\$ 154,173
<b>Total</b>	Number	120	146	78	56	65	0	0	0	465
	Total Salary	\$ 17,143,212	\$ 21,166,674	\$ 11,860,937	\$ 8,520,549	\$ 10,474,006	\$ 0	\$ 0	\$ 0	\$ 69,165,378
	Average Sal.	\$ 142,860	\$ 144,977	\$ 152,063	\$ 152,153	\$ 161,139	\$ 0	\$ 0	\$ 0	\$ 148,743



**INACTIVE VESTED MEMBERS**  
**As of June 30, 2020 for the June 30, 2021 Valuation**

<u>Age</u>	<u>Count of Members</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>
29 & Under	0	0	0
30-34	0	0	0
35-39	0	0	0
40-44	0	0	0
45-49	0	1	1
50-54	3	2	5
55-59	2	3	5
60-64	6	6	12
65 & Up	<u>1</u>	<u>0</u>	<u>1</u>
Total	12	12	24



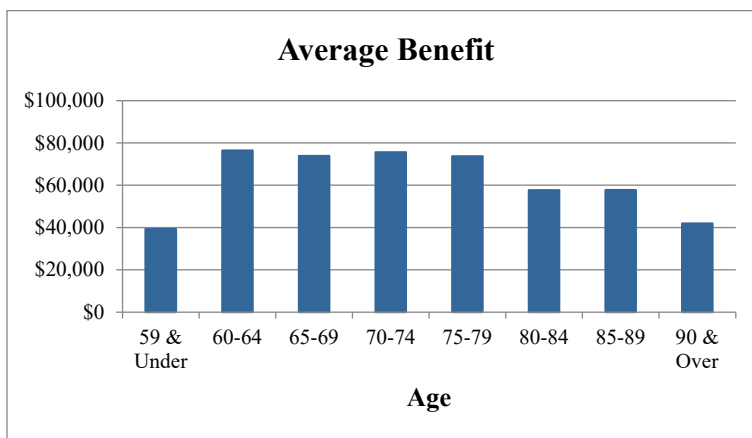
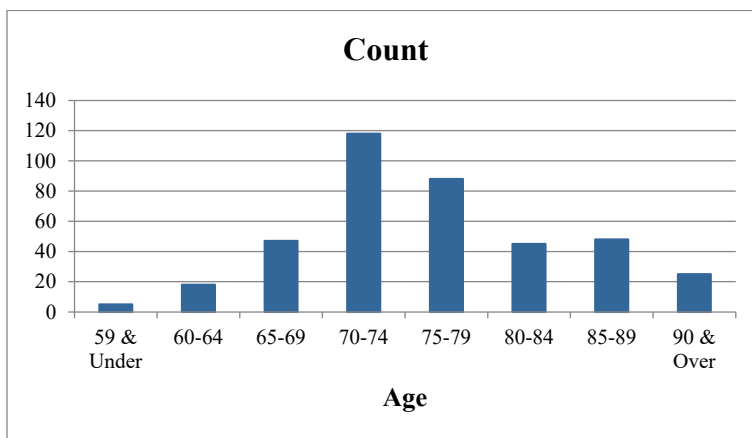




**APPENDIX A – MEMBERSHIP DATA**

**MEMBERS AND BENEFICIARIES RECEIVING BENEFITS  
As of June 30, 2020 for the June 30, 2021 Valuation**

Age	Count of Members			Annual Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	0	5	5	\$ 0	\$ 196,467	\$ 196,467
60-64	9	9	18	774,954	601,574	1,376,528
65-69	34	13	47	2,653,965	818,713	3,472,678
70-74	87	31	118	7,279,502	1,646,671	8,926,173
75-79	69	19	88	5,663,580	824,821	6,488,401
80-84	22	23	45	1,724,946	871,002	2,595,948
85-89	26	22	48	2,093,739	677,992	2,771,731
90 & Over	<u>7</u>	<u>18</u>	<u>25</u>	<u>460,506</u>	<u>588,710</u>	<u>1,049,216</u>
Total	254	140	394	\$ 20,651,192	\$ 6,225,950	\$ 26,877,142





**MEMBERS AND BENEFICIARIES RECEIVING BENEFITS  
As of June 30, 2020 for the June 30, 2021 Valuation**

**Schedule of Average Benefit Payments <sup>1</sup>**

For the Year Ended June 30, 2021	Years of Credited Service						Total
	< 10	10 - 14	15 - 19	20 - 24	25 - 29	30 +	
Average Monthly Defined Benefit	\$2,191	\$4,949	\$5,918	\$6,680	\$6,694	\$6,795	\$5,685
Average Final Average Salary <sup>2</sup>	\$107,521	\$125,235	\$130,524	\$132,271	\$117,330	\$128,801	\$126,968
Number of Benefit Recipients	38	90	92	101	40	33	394

**Schedule of Benefit Recipients by Type of Benefit Option <sup>1</sup>**

Amount of Monthly Benefit (in dollars)	Number of Recipients by Benefit Option			Total Benefit Recipients
	Joint with 50% Survivor Benefits	Survivors	Disability	
1 - 500	0	0	0	0
501 - 1,000	0	0	0	0
1,001 - 1,500	0	21	0	21
1,501 - 2,000	0	11	0	11
2,001 - 2,500	3	12	0	15
2,501 - 3,000	4	18	0	22
Over 3,000	281	42	2	325
Total	288	104	2	394

<sup>1</sup> Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

<sup>2</sup> Excludes the 108 in-pay members who are missing a final average salary in the data.



**MEMBERS AND BENEFICIARIES RECEIVING BENEFITS  
As of June 30, 2020 for the June 30, 2021 Valuation**

**Schedule of Retirants and Beneficiaries**

	<u>Added to Rolls</u>		<u>Removed from Rolls</u>		<u>Rolls - End of Year</u>		<b>Percent Change In Total Annual Benefits</b>	<b>Average Annual Benefit</b>	<b>Percent Change In Average Annual Benefit</b>
	<b>Number</b>	<b>Annual Benefits <sup>1</sup></b>	<b>Number</b>	<b>Annual Benefits <sup>1</sup></b>	<b>Number</b>	<b>Total Annual Benefits <sup>1,2</sup></b>			
2021 <sup>3</sup>	10	\$729	12	\$492	394	\$26,877	2.2%	\$68,216	2.8%
2020 <sup>3</sup>	31	2,498	10	261	396	26,289	10.5	66,387	4.6
2019 <sup>3</sup>	18	1,340	8	191	375	23,794	5.1	63,450	2.3
2018 <sup>3</sup>	22	1,723	7	309	365	22,637	5.5	62,019	1.1
2017 <sup>3</sup>	9	696	10	509	350	21,465	2.4	61,329	2.7
2016 <sup>3</sup>	34	2,520	9	340	351	20,959	12.8	59,714	4.8
2015 <sup>3</sup>	10	494	5	195	326	18,578	0.6	56,987	(1.0)
2014 <sup>3</sup>	0	0	0	0	321	18,474	0.0	57,551	0.0
2013	24	1,798	14	442	321	18,474	8.5	57,551	5.1
2012	7	444	6	194	311	17,028	1.4	54,751	1.1

<sup>1</sup>Dollar amounts are in thousands except for the average annual benefit.

<sup>2</sup>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.

<sup>3</sup>The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.



## APPENDIX B – SUMMARY OF PLAN PROVISIONS

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### Definitions

Fiscal year	Twelve month period ending June 30.
Participation	All individuals serving as a judge or justice in Indiana as defined in IC 33-38-6-7. A judge who begins service before September 1, 1985 shall be a participant of the 1977 Plan (IC 33-38-7) and a judge who begins service after August 31, 1985 shall be a participant of the 1985 Plan (IC 33-38-8).
Member contributions	Each participant contributes 6% of his total salary until completion of 22 years of service. Beginning in 2013, the employee contributions are picked up by the employer as pre-tax money which are also included in annual salary.
Earnings	Earnings is the annual salary being paid for the office which the participant held at the time of separation from service effective January 1, 2010.

### Eligibility for Benefits

Deferred vested	8 or more years of creditable service and no longer active.
Disability retirement	A participant is considered disabled if two (2) physicians certify that the participant is totally incapacitated from earning a livelihood and that the condition is likely to be permanent.
Early retirement	Age 62 with 8 or more years of creditable service.
Normal retirement	Earliest of: <ul style="list-style-type: none"><li>- Age 65 with 8 or more years of creditable service</li><li>- Age 55 with sum of age and creditable service equal to 85 or more</li></ul>
Pre-retirement death	8 or more years of creditable service entitled to a future benefit.



## APPENDIX B – SUMMARY OF PLAN PROVISIONS

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### Monthly Benefits Payable

#### Normal retirement

The normal retirement benefit is a monthly annuity payable for life with a 50% continuation (or \$12,000 annually, if greater) to a surviving spouse or surviving dependent children. The benefit is equal to a percentage of earnings in accordance with the following table:

Years of Service	Percentage
7 or less	0%
8	24%
9	27%
10	30%
11	33%
12	50%
13	51%
14	52%
15	53%
16	54%
17	55%
18	56%
19	57%
20	58%
21	59%
22 or more	60%

An additional percentage shall be calculated by prorating between applicable percentages, based on the number of months in a partial year of service.

#### Early retirement

The early retirement benefit is the accrued retirement benefit determined as of the early retirement date and payable commencing at the normal retirement date. A participant may elect to have the benefit commence prior to age 65 provided the benefit is reduced by 0.1% for each month that the benefit commencement date precedes age 65.

#### Deferred retirement

The termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing as of the normal retirement date. The participant may elect to receive a reduced early retirement benefit.



## APPENDIX B – SUMMARY OF PLAN PROVISIONS

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### Disability

The disability retirement benefit is payable for the duration of the disability commencing the month following disability date. The amount of monthly benefit shall be equal to a percentage of: (1) for the 1977 JRS Plan – the salary paid for the office the member held at the time of separation; (2) for the 1985 Plan - salary paid to the member at the time of separation. The percentages are in accordance with the following table:

Years of Service	Percentage
12 or less	50%
13	51%
14	52%
15	53%
16	54%
17	55%
18	56%
19	57%
20	58%
21	59%
22 or more	60%

An additional percentage shall be calculated by prorating between applicable percentages, based on the number of months in a partial year of service.

### Pre-retirement death

If death occurs (a) while receiving benefits, (b) while in service as a judge with 8 or more years of service, or (c) while permanently disabled, the spouse or family of dependent children shall be eligible for a benefit equal to the greater of \$12,000 (effective July 1, 1977) annually or 50% of the benefit the participant was receiving or was entitled to receive at the time of death.

Spousal benefits are payable as a lifetime monthly pension.

### Post-retirement benefit increases

Participant benefits in the Judges' 1977 Retirement, Disability, and Death Plan increase in the same ratio as the salary being paid for the office a participant held at the time of separation from service increases. Effective January 1, 2010, the Judges' 1985 Retirement, Disability, and Death Plan will also have benefits increase in the same manner, on a prospective basis only.



## APPENDIX B – SUMMARY OF PLAN PROVISIONS

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Cost-of-Living-Adjustments	Benefits for retired members (does not include disabled members or surviving spouses) increase automatically based on the annual pay increase granted for the position the member held at the time of retirement. The annual cost-of-living assumption for the valuation is 2.65%, which is the same as the salary increase assumption for active members.
Forms of payment	
a. Single life annuity	Member will receive a monthly benefit for life, but there are no monthly payments to anyone after death.
b. Joint with one-half survivor benefits	Member will be paid a monthly benefit for life. After death, one-half (1/2) of the benefit will be paid to the spouse for their lifetime or the dependent until age 18 unless disabled. If the dependent child was named the beneficiary, once they are no longer entitled to the benefit, the spouse would receive the benefit for life.

### 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. 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, 2020 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2020 and June 30, 2021. The valuation results from June 30, 2020 were rolled-forward to June 30, 2021 to reflect benefit accruals during the year less benefits paid.

### **2. Asset Valuation Method**

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

### **3. State Appropriations**

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





## APPENDIX C – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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### 4. Anticipated Payroll

The anticipated payroll for the fiscal year following the valuation date is equal to the actual payroll during the year ending on the valuation date, increased with the actual pay adjustment as of the valuation date. The proportion of pay attributable to active members with more than 22 years of service is presumed constant.

### Changes in Methods since the Prior Year

None.



## ACTUARIAL ASSUMPTIONS

Valuation Date June 30, 2021

### 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 2.65% per year beginning July 1, 2022. Actual salary increases on July 1, 2020 (3.30%) and July 1, 2021 (2.45%) are reflected in the in the valuation.
4. Interest on member balances 3.30% per year
5. Cost-of-Living Adjustment (COLA) 2.65% compounded annually, beginning July 1, 2022. Actual COLA increases at July 1, 2020 (3.30%) and July 1, 2021 (2.45%) are reflected in the valuation.

### 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* – General Employee table with a 1 year setback for males and a 1 year setback for females.  
  
*Retirees* – General Retiree table with a 1 year setback for males and a 1 year setback for females.  
  
*Beneficiaries* – Contingent Survivor table with no set forward for males and a 2 year set forward for females.  
  
*Disableds* – General Disabled table with a 140% load.



**APPENDIX C – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

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2. Disability

Age	Sample Rates
20	0.057%
25	0.081%
30	0.105%
35	0.140%
40	0.210%
44-64	0.300%
65+	0.000%

3. Retirement

Age	Eligible for Reduced Benefit	Eligible for Unreduced Benefit
55-61	N/A	20%
62-64	8%	20%
65-74	N/A	30%
75+	N/A	100%

Inactive vested members are assumed to commence their retirement benefit at their earliest eligible retirement date.

4. Termination

3% per year for all members prior to retirement eligibility.

**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.



## **APPENDIX C – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

---

### **Changes in Assumptions since the Prior Year**

As a result of the Asset-Liability work completed and discussed at the May 7, 2021 Board meeting, the Board made portfolio revisions and adopted a new set of economic assumptions for the June 30, 2021 actuarial valuations as follows:

- The investment return assumption was lowered from 6.75% (as of June 30, 2020) to 6.25%.
- Price inflation was lowered from 2.25% (as of June 30, 2020) to 2.00%.
- General wage inflation was lowered from 2.75% (as of June 30, 2020) to 2.65%.
- Interest on member balances was lowered from 3.50% (as of June 30, 2020) to 3.30%.
- Cost-of-living adjustments were lowered from 2.75% (as of June 30, 2020) to 2.65%, which aligns with the assumed salary increases.

### **Data Adjustments**

Active and retired member data is reported as of June 30. Member census data as of June 30, 2020 was used in the valuation and adjusted. Standard actuarial roll-forward techniques were then used to project the liability computed as of June 30, 2020 to the June 30, 2021 valuation date. The normal cost rate is assumed to remain unchanged between June 30, 2020 and June 30, 2021.

The member total payroll and the asset information for this valuation were furnished as of June 30, 2021. Total payroll in FYE 2022 is assumed to increase by the actual salary increase as of the valuation date over the total payroll observed for FYE 2021. 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.



## APPENDIX D – GLOSSARY OF ACTUARIAL TERMS

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<b>Accrued Service</b>	Service credited under the plan that was rendered before the date of the actuarial valuation.
<b>Actuarial Assumptions</b>	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.
<b>Actuarial Cost Method</b>	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.”
<b>Actuarial Equivalent</b>	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.
<b>Actuarial Accrued Liability</b>	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.”
<b>Actuarial Present Value</b>	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.
<b>Amortization</b>	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
<b>Experience Gain (Loss)</b>	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
<b>Normal Cost</b>	The actuarial present value of retirement plan benefits allocated to the current year by the actuarial cost method.
<b>Unfunded Actuarial Accrued Liability</b>	<p>The difference between actuarial liability and the actuarial value of assets. Sometimes referred to as “unfunded accrued liability” or “unfunded liability.”</p> <p>Most retirement plans have unfunded actuarial liability. They arise anytime new benefits are added and anytime an actuarial loss is realized.</p>