

# **Judicial Retirement System of New Jersey**

GASB 68 Report as of June 30, 2023

**Produced by Cheiron** 

February 2024

# TABLE OF CONTENTS

| <u>Section</u>    |                                   | <u>Page</u> |
|-------------------|-----------------------------------|-------------|
| Section I         | Board Summary                     | 1           |
| Section II        | Certification                     | 2           |
| Section III       | Determination of Discount Rate    | 4           |
| Section IV        | Employer Reporting Amounts        | 5           |
| <u>Appendices</u> |                                   |             |
| Appendix A        | Membership Information            | 9           |
| Appendix B        | Actuarial Assumptions and Methods | 10          |
| Appendix C        | Summary of Plan Provisions.       | 16          |
| Appendix D        | Determination of Discount Rate    | 21          |
| Appendix E        | Glossary of Terms                 | 25          |



### **SECTION I – BOARD SUMMARY**

The purpose of this report is to provide accounting and financial disclosure information under Governmental Accounting Standards Board Statement 68 for the Judicial Retirement System of New Jersey (JRS, Plan or System). This information includes:

- Disclosure of Deferred Inflows and Outflows, and
- Calculation of the Annual Pension Expense.

# **Highlights**

The reporting date for JRS is June 30, 2023. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2023 and the Total Pension Liability as of the valuation date, July 1, 2022, updated to June 30, 2023. We are not aware of any significant events between the valuation date and the measurement date that are measurable at this time, so the update procedures only included the addition of service cost and interest cost offset by actual benefit payments. Additional information about the TPL can be found in the GASB 67 report.

The following table provides a summary of the key results during this reporting period.

| Table I-1 Summary of Results                                   |    |  |    |  |  |  |  |  |  |  |  |
|--|----|--|----|--|--|--|--|--|--|--|--|
| Measurement Date   |    | 6/30/2023                                |    | 6/30/2022                                  |  |  |  |  |  |  |  |
| Net Pension Liability<br>Deferred Outflows<br>Deferred Inflows | \$ | 710,817,008<br>(9,187,925)<br>16,143,895 | \$ | 718,189,040<br>(28,248,532)<br>146,312,801 |  |  |  |  |  |  |  |
| Net Impact on Statement of Net Position                        | \$ | 717,772,978                              | \$ | 836,253,309                                |  |  |  |  |  |  |  |
| Pension Expense<br>Pension Expense (% of Payroll)              | \$ | (48,768,627)<br>(63.31%)                 | \$ | (525,123)<br>(0.69%)                       |  |  |  |  |  |  |  |



#### SECTION II – CERTIFICATION

The purpose of this report is to provide accounting and financial reporting information under GASB 68 for the Judicial Retirement System of New Jersey (JRS). This report is for the use of JRS, the Division of Pensions and Benefits (DPB) and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for JRS and estimating the price to settle JRS's obligations.

In preparing our report, we relied on information (some oral and some written) supplied by the DPB. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, Data Quality.

Future actuarial measurements may differ significantly from the current measurements 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; and changes in plan provisions or applicable law.

For purposes of this report, the calculation of the Total Pension Liability and the projection of the Plan's contributions and benefit payments as of June 30, 2023 was based on the recommended demographic assumptions of the July 1, 2018 – June 30, 2021 Experience Study, which was approved by the State House Commission on January 9, 2023.

This report was prepared using census data as of the July 1, 2022 valuation date and financial information as of the June 30, 2023 measurement date.

This report reflects two changes to the plan provisions. Chapter 94, P.L. 2022 removes the restriction on the receipt of retirement annuities by certain members of the Judicial Retirement System who file for deferred retirement. Chapter 31, P.L. 2023 permits a judge who was collecting an annuity from a State-administered retirement system while serving as a judge and deferred retirement to become County Prosecutor or Administrative Director of the Courts between November 1, 2020 and April 3, 2023, to continue to collect that annuity while serving in that position. Chapter 94, P.L. 2022 and Chapter 31, P.L. 2023 did not impact the Total Pension Liability for this report due to the current demographic assumptions and covered population.

Based on the State Treasurer's recommendation, the investment return assumption used to determine the actuarially determined contributions is 7.00% per annum.

In accordance with Paragraph 40 of GASB Statement No. 67, the projection of the Plan's fiduciary net position is based on a long-term expected rate of return of 7.00% per annum. The discount rate used to measure the Total Pension Liability is 7.00% as of June 30, 2023 and is described in Section III of the report.



### **SECTION II - CERTIFICATION**

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for JRS for the purposes described herein and for the use by the plan auditors in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

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#### SECTION III – DETERMINATION OF DISCOUNT RATE

The discount rate used to measure the Total Pension Liability was 7.00% as of June 30, 2022 and June 30, 2023. As discussed with the Division of Pensions and Benefits, the projection of cash flows used to determine the discount rate as of June 30, 2023 assumed:

- In accordance with Paragraph 40 of GASB Statement No. 67, the projection of the Plan's fiduciary net position is based on a long-term expected rate of return of 7.00% per annum.
- In accordance with Paragraph 41 of GASB Statement No. 67, the projection of the Plan's contributions and benefit payments are based on the same assumptions used to determine the expected contributions for the System. The demographic assumptions are based on the recommendations of the July 1, 2018 June 30, 2021 Experience Study, which was approved by the State House Commission on January 9, 2023.
  - Based on the State Treasurer's recommendation, the investment return assumption used to determine the actuarially determined contributions is 7.00% per annum.
- It is assumed that the State will contribute 100% of the actuarially determined contribution and Non-Contributory Group Insurance Premium Fund (NCGIPF) contribution. The 100% contribution rate is the total State contribution rate expected to be paid in fiscal year ending June 30, 2024 with respect to the actuarially determined contribution for the fiscal year ending June 30, 2024 for all State-administered retirement systems.
- Consistent with Chapter 83, P.L. 2016, it is assumed that the State will make pension contributions in equal amounts at the end of each quarter.
- The NCGIPF contributions are assumed to be paid monthly.
- Annual administrative expenses are assumed to be 0.27% of expected pension benefit payments.

In the event the Plan's fiduciary net position was no longer sufficient to make future benefit payments, municipal bond rates of 3.54% as of June 30, 2022 and 3.65% as of June 30, 2023 would be used to develop the blended GASB discount rate. As selected by the State Treasurer, the rates are based on the Bond Buyer GO 20-Bond Municipal Bond Index.

As of June 30, 2023, based on the assumptions above, the pension Plan's fiduciary net position is expected to be sufficient to make all projected future benefit payments for current Plan members; therefore, the GASB discount rate as of June 30, 2023 is equal to the long-term rate of return of 7.00%. Similarly, the GASB discount rate as of June 30, 2022 was equal to the long-term rate of return of 7.00%. The assumed discount rates have been determined in accordance with the method prescribed by GASB Statement No. 67. See Appendix D for the determination of the discount rate.



### **SECTION IV – EMPLOYER REPORTING AMOUNTS**

Consistent with previous reporting, the schedules in this section will be used by the State for its 2024 reporting.

The impact of experience gains or losses and assumption changes on the TPL are recognized in expense over the average expected remaining service life of all active and inactive members of the System. As of the measurement date, this recognition period was 3.05 years.

The following tables summarize the current balances of deferred outflows and deferred inflows of resources along with the net recognition over the next five years.

| Table IV-1<br>Schedule of Deferred Inflows and  |                 | tflows of Reso   | ırces     |  |
|---|-----------------|--|-----------|--|
|   | (               | Deferred<br>Outflows of<br>Resources                     | I         | Deferred<br>nflows of<br>Resources             |
| Differences between expected and actual experience Changes in assumptions Net differences between projected and actual earnings on pension plan investments Total | \$<br><b>\$</b> | 1,081,935<br>0<br>8,105,990<br><b>9,187,925</b>          | \$        | 63,753<br>16,080,142<br>0<br><b>16,143,895</b> |
| Amounts reported as deferred outflows and deferred in pension expense as follows:   | flow            | s of resources wil                                       | l be reco | ognized in                                     |
| Measurement year ended June 30: 2024 2025 2026 2027 2028 Thereafter   | \$              | (13,276,135)<br>1,106,369<br>6,141,709<br>(927,913)<br>0 |           |  |



# **SECTION IV – EMPLOYER REPORTING AMOUNTS**

|                |                |        |                   |      |                |     | Table           |     |               |     |                 |        |      |    |      |   |    |            |
|----------------|----------------|--------|-------------------|------|----------------|-----|-----------------|-----|---------------|-----|-----------------|--------|------|----|------|---|----|------------|
|                |                |        |                   |      |                | ule | of Deferred Inf | lov | vs and Outflo | WS  | of Resources    |        |      |    |      |   |    |            |
| Recognition of | differences be | tween  | expected and act  | ual  | experience     |     |                 |     |               |     |                 |        |      |    |      |   |    |            |
| From           | Remaining      |        | Remaining         |      |                |     |                 |     |               |     |                 |        |      |    |      |   |    |            |
| Measurement    | Recognition    | De     | ferred (Inflows)  |      |                |     |                 |     |               | Re  | ecognition Year |        |      |    |      |   |    |            |
| Year Ending    | Period         | a      | nd Outflows*      |      | 2023           |     | 2024            |     | 2025          |     | 2026            | 2027   |      |    | 2028 |   |    | Thereafter |
| 2023           | 3.05           | \$     | 1,460,241         | \$   | 478,768        | \$  | 478,768         | \$  | 478,768       | \$  | 23,937 \$       |        | 0    | \$ |      | 0 | \$ |            |
| 2022           | 1.95           |        | 206,212           |      | 105,750        |     | 100,462         |     | 0             |     | 0               |        | 0    |    |      | 0 |    |            |
| 2021           | 1.12           |        | (595,016)         |      | (531,263)      |     | (63,753)        |     | 0             |     | 0               |        | 0    |    |      | 0 |    |            |
| 2020           | 0.37           |        | 309,201           |      | 309,201        |     | 0               |     | 0             |     | 0               |        | 0    |    |      | 0 |    |            |
| Total          |                | \$     | 1,380,638         | \$   | 362,456        | \$  | 515,477         | \$  | 478,768       | \$  | 23,937 \$       |        | 0    | \$ |      | 0 | \$ | (          |
| Recognition of | changes in ass | umnti  | ons               |      |                |     |                 |     |               |     |                 |        |      |    |      |   |    |            |
| From           | Remaining      | шпри   | Remaining         |      |                |     |                 |     |               |     |                 |        |      |    |      |   |    |            |
| Measurement    | Recognition    | De     | ferred (Inflows)  |      |                |     |                 |     |               | R.  | ecognition Year |        |      |    |      |   |    |            |
| Year Ending    | Period         |        | nd Outflows*      | _    | 2023           |     | 2024            |     | 2025          | 100 | 2026            | 2027   |      |    | 2028 |   |    | Thereafter |
| 2023           | 3.05           | \$     | 0                 | \$   | 0              | \$  | 0 5             | ¢   | 0             | \$  | 0 \$            | 2027   | 0    | \$ | 2020 | 0 | \$ | Therearter |
| 2022           | 1.95           | Ψ      | (1,230,205)       | Ψ    | (630,875)      | Ψ   | (599,330)       | Ф   | 0             | Ψ   | 0               |        | 0    | Ψ  |      | 0 | Ψ  |            |
| 2021           | 1.12           |        | (1,230,203)       | (    | (129,006,768)  |     | (15,480,812)    |     | 0             |     | 0               |        | 0    |    |      | 0 |    |            |
| 2020           | 0.37           |        | 12,377,879        | ,    | 12,377,879     |     | (13,460,612)    |     | 0             |     | 0               |        | 0    |    |      | 0 |    |            |
| Total          | 0.57           | \$     | , ,               | \$ ( | (117,259,764)  | \$  | (16,080,142) 5  | \$  | 0             | \$  | 0 \$            |        | 0    | \$ |      | - | \$ |            |
| 10141          |                | Ψ      | (155,557,700)     | Ψ (  | (117,235,701)  | Ψ   | (10,000,112)    | Ψ   |               | Ψ   | σ φ             |        |      | Ψ  |      | • | Ψ  |            |
| Recognition of | net difference | s betw | een projected and | d ac | ctual earnings | on  | pension plan in | nve | stments       |     |                 |        |      |    |      |   |    |            |
| From           | Remaining      |        | Remaining         |      |                |     |                 |     |               |     |                 |        |      |    |      |   |    |            |
| Measurement    | Recognition    |        | ferred (Inflows)  |      |                |     |                 |     |               | Re  | ecognition Year |        |      |    |      |   |    |            |
| Year Ending    | Period         | a      | nd Outflows*      |      | 2023           |     | 2024            |     | 2025          |     | 2026            | 2027   |      |    | 2028 |   |    | Thereafter |
| 2023           | 5.00           | \$     | (4,639,557)       | \$   | (927,911)      | \$  | (927,911)       | \$  | (927,911)     | \$  | (927,911) \$    | (927,9 | 913) | \$ | ·    | 0 | \$ |            |
| 2022           | 4.00           |        | 28,182,726        |      | 7,045,681      |     | 7,045,681       |     | 7,045,681     |     | 7,045,683       |        | 0    |    |      | 0 |    |            |
| 2021           | 3.00           |        | (16,470,505)      |      | (5,490,168)    |     | (5,490,168)     |     | (5,490,169)   |     | 0               |        | 0    |    |      | 0 |    |            |
| 2020           | 2.00           |        | 3,321,855         |      | 1,660,927      |     | 1,660,928       |     | 0             |     | 0               |        | 0    |    |      | 0 |    |            |
| 2019           | 1.00           |        | 321,164           |      | 321,164        |     | 0               |     | 0             |     | 0               |        | 0    |    |      | 0 |    |            |
| Total          |                | \$     | 10,715,683        | \$   | 2,609,693      | \$  | 2,288,530       | \$  | 627,601       | \$  | 6,117,772 \$    | (927,9 | 913) | \$ |      | 0 | \$ |            |
|                |                |        |                   |      |                |     |                 |     |               |     |                 |        |      |    |      |   |    |            |
| Grand Total    |                | \$     | (121,243,585)     | \$ ( | (114,287,615)  | \$  | (13,276,135)    | \$  | 1,106,369     | \$  | 6,141,709 \$    | (927,9 | 913) | \$ |      | 0 | \$ |            |

<sup>\*</sup> As of the beginning of the measurement year



#### SECTION IV – EMPLOYER REPORTING AMOUNTS

The annual pension expense recognized by the State can be calculated two different ways. First, it is the change in the amounts reported on the Statement of Net Position that relate to JRS and are not attributable to employer contributions. That is, it is the change in NPL plus the changes in deferred outflows and inflows plus employer contributions.

Alternatively, annual pension expense can be calculated by its individual components. While GASB does not require or suggest the organization of the individual components shown in the following table, we believe it helps to understand the level and volatility of pension expense.

First, there are components referred to as operating expenses. These are items directly attributable to the operation of the plan during the measurement year. Service cost less employee contributions represents the increase in employer-provided benefits attributable to the year, and administrative expenses are the cost of operating JRS for the year.

Second, there are the financing expenses: the interest on the Total Pension Liability less the expected return on assets.

The final category is changes. This category will drive most of the volatility in pension expense from year to year. It includes any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses.

The following table shows the development of pension expense for the State through both of these methodologies.



# **SECTION IV – EMPLOYER REPORTING AMOUNTS**

| Table IV-3 Calculation of Pension Expense  |    |               |    |               |  |  |  |  |  |  |  |
|--|----|---------------|----|---------------|--|--|--|--|--|--|--|
| Measurement Year Ending                    |    | 2023          |    | 2022          |  |  |  |  |  |  |  |
| Change in Net Pension Liability            | \$ | (7,372,032)   | \$ | 21,570,348    |  |  |  |  |  |  |  |
| Change in Deferred Outflows                |    | 19,060,607    |    | 50,294,826    |  |  |  |  |  |  |  |
| Change in Deferred Inflows                 |    | (130,168,906) |    | (145,344,717) |  |  |  |  |  |  |  |
| Employer Contributions                     |    | 69,711,704    |    | 72,954,420    |  |  |  |  |  |  |  |
| Pension Expense                            | \$ | (48,768,627)  | \$ | (525,123)     |  |  |  |  |  |  |  |
| Pension Expense as % of Payroll            |    | (63.31%)      |    | (0.69%)       |  |  |  |  |  |  |  |
| Operating Expenses                         |    |               |    |               |  |  |  |  |  |  |  |
| Service cost                               | \$ | 25,247,323    | \$ | 25,155,887    |  |  |  |  |  |  |  |
| Employee contributions                     |    | (9,799,479)   |    | (9,608,031)   |  |  |  |  |  |  |  |
| Administrative expenses                    |    | 177,626       |    | 183,857       |  |  |  |  |  |  |  |
| Total                                      | \$ | 15,625,470    | \$ | 15,731,713    |  |  |  |  |  |  |  |
| Financing Expenses                         |    |               |    |               |  |  |  |  |  |  |  |
| Interest cost                              | \$ | 62,546,102    | \$ | 61,145,172    |  |  |  |  |  |  |  |
| Expected return on assets                  |    | (12,652,584)  |    | (16,031,406)  |  |  |  |  |  |  |  |
| Total                                      | \$ | 49,893,518    | \$ | 45,113,766    |  |  |  |  |  |  |  |
| Changes                                    |    |               |    |               |  |  |  |  |  |  |  |
| Benefit changes                            | \$ | 0             | \$ | 0             |  |  |  |  |  |  |  |
| Recognition of assumption changes          |    | (117,259,764) |    | (68,230,968)  |  |  |  |  |  |  |  |
| Recognition of liability gains and losses  |    | 362,456       |    | 4,024,090     |  |  |  |  |  |  |  |
| Recognition of investment gains and losses |    | 2,609,693     |    | 2,836,276     |  |  |  |  |  |  |  |
| Total                                      | \$ | (114,287,615) | \$ | (61,370,602)  |  |  |  |  |  |  |  |
| Pension Expense                            | \$ | (48,768,627)  | \$ | (525,123)     |  |  |  |  |  |  |  |



# **APPENDIX A – MEMBERSHIP INFORMATION**

| Plan Membership   |               |               |  |  |  |  |  |  |  |  |
|---|---------------|---------------|--|--|--|--|--|--|--|--|
|   | July 1, 2022  | July 1, 2021  |  |  |  |  |  |  |  |  |
| Contributing Actives  | 390           | 394           |  |  |  |  |  |  |  |  |
| Non-Contributing Actives  | 4             | 10            |  |  |  |  |  |  |  |  |
| Terminated Vested   | 9             | 9             |  |  |  |  |  |  |  |  |
| Inactive Receiving Benefits   | 678           | <u>655</u>    |  |  |  |  |  |  |  |  |
| Total   | 1,081         | 1,068         |  |  |  |  |  |  |  |  |
| Annual Compensation for Contributing Actives Annual Retirement Allowances for Those | \$ 77,035,971 | \$ 76,401,342 |  |  |  |  |  |  |  |  |
| Receiving Benefits  | \$ 65,321,417 | \$ 61,939,137 |  |  |  |  |  |  |  |  |



### APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

# A. Actuarial Assumptions

1. Investment Rate of

7.00% per annum, compounded annually.

Return for determining Actuarially **Determined Contributions** 

Rate of Return

**2.** Long-Term Expected 7.00% per annum, compounded annually.

3. Interest Crediting **Deductions** 

7.00% per annum, compounded annually. Interest credits are Rate on Accumulated assumed to end upon termination.

- 4. GASB 67 Effective **Discount Rate**
- June 30, 2022: 7.00% per annum, compounded annually.
- June 30, 2023: 7.00% per annum, compounded annually.
- 5. Price Inflation
- 2.75% per annum, compounded annually.
- 6. Wage Inflation
- 3.25% per annum, compounded annually.
- 7. Cost-of-Living **Adjustments** (COLAs)

No future COLA is assumed. Previously granted COLAs are included in the data.

8. Salary Increases

Salaries are assumed to increase 2.0% per year through FYE 2025 and 2.75% per year thereafter.

Salary increases are assumed to occur on January 1.

9. 401(a)(17) Pay Limit

\$305,000 in 2022 increasing 2.75% per annum, compounded

annually.

10. Termination

None assumed.

11. Disability

Representative disability rates are as follows:

| Age | Rates  |
|-----|--------|
| 30  | 0.022% |
| 35  | 0.026  |
| 40  | 0.033  |
| 45  | 0.064  |
| 50  | 0.114  |
| 55  | 0.197  |
| 60  | 0.326  |
| 65  | 0.473  |



### APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 12. Mortality

Healthy Retiree Mortality (Healthy Annuitants): The Pub-2010 Teachers Above-Median Income Healthy Retiree mortality table [PubT-2010(A) Healthy Retiree] as published by the Society of Actuaries (SOA), unadjusted, and with future improvement from the base year of 2010 on a generational basis using SOA's Scale MP-2021.

<u>Disabled Retiree Mortality (Disabled Annuitants)</u>: The Pub-2010 Non-Safety Disabled Retiree mortality table [PubNS-2010 Disabled Retiree] as published by the SOA, unadjusted, and with future improvement from the base year of 2010 on a generational basis using SOA's Scale MP 2021.

<u>Pre-Retirement Mortality (Non-Annuitants)</u>: The Pub-2010 Teachers Above-Median Income Employee mortality table [PubT-2010(A) Employee] as published by the SOA, unadjusted, and with future improvement from the base year of 2010 on a generational basis using SOA's Scale MP-2021.

#### 13. Retirement

#### Retirement rates are as follows:

| Age  | Less than<br>15 Years<br>of<br>Judicial<br>Service | 15-19<br>Years of<br>Judicial<br>Service | 20 or more<br>Years of<br>Judicial<br>Service |
|------|--|--|---|
| < 60 | 0.0%   | 0.0%                                     | 0.0%  |
| 60   | 2.0  | 2.0                                      | 20.0  |
| 61   | 2.0  | 2.0                                      | 20.0  |
| 62   | 2.0  | 2.0                                      | 20.0  |
| 63   | 2.0  | 2.0                                      | 20.0  |
| 64   | 2.0  | 2.0                                      | 20.0  |
| 65   | 5.0  | 40.0                                     | 30.0  |
| 66   | 2.0  | 40.0                                     | 20.0  |
| 67   | 2.0  | 40.0                                     | 20.0  |
| 68   | 2.0  | 40.0                                     | 20.0  |
| 69   | 2.0  | 40.0                                     | 20.0  |
| 70   | 100.0  | 100.0                                    | 100.0   |



#### APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

# 14. Family Composition Assumptions

For members not currently in receipt, 90% of members are assumed married to spouses of the opposite sex. Males are assumed to be two years older than females.

For purposes of the optional form of payment death benefit for members currently in receipt, beneficiary status is based on the beneficiary allowance reported. If no beneficiary date of birth is provided, the beneficiary is assumed to be the member's spouse of the opposite sex with males assumed to be two years older than females.

For purposes of the statutory death benefit for members currently in receipt, 100% of participants are assumed married to spouses of the opposite sex, with the exception of those members who elected Optional Forms A, B, C or D and are currently in receipt of their maximum retirement allowance. The spouse is assumed to be the reported beneficiary. If no beneficiary date of birth is provided, males are assumed to be two years older than females.

No additional dependent children or parents are assumed.

Current dependents under age 21 are assumed to receive a benefit until age 21. Current dependents over age 21 are assumed to receive a benefit for the remainder of their lifetime.

# 15. Form of Payment

Current actives are assumed to elect the Maximum Option.

#### 16. Data

Information provided by the prior actuary was relied upon for the purposes of valuing certain deferred vested members.

For current beneficiaries with missing data, reasonable assumptions were made based on the information available in prior years.

Inactives receiving benefits according to the 2021 data but omitted from the 2022 data are assumed to have died without a beneficiary.

# 17. Rationale for Assumptions

The demographic and economic assumptions used in this report, except for the investment return assumption, reflect the results of the July 1, 2018 – June 30, 2021 Experience Study, which was approved by the State House Commission on January 9, 2023. The investment return assumption was recommended by the State Treasurer. We find the investment return assumption to be reasonable based on the System's current asset allocation and the capital market outlook of the New Jersey Division of Investment.



### APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

### 18. Projection Basis

This report includes projections of future assets, benefit payments and contributions for the purpose of determining the GASB 67 discount rate.

The projections are based on the census data as of July 1, 2022 and the financial information as of June 30, 2023. The projections assume continuation of the plan provisions and actuarial assumptions in effect as of July 1, 2023 and do not reflect the impact of any changes in benefits or actuarial assumptions that may be adopted after July 1, 2023 unless otherwise indicated. While the assumptions individually are reasonable for the underlying valuation that supports the projections, specifically for projection purposes, they are also considered reasonable in the aggregate.

19. Changes in Assumptions Since Last Valuation

None.



#### APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

#### **B.** Actuarial Methods

The actuarial methods used for determining State contributions are described as follows.

#### 1. Actuarial Cost Method

The actuarial cost method for funding calculations is the Projected Unit Credit Cost Method.

The actuarial liability is calculated as the actuarial present value of the projected benefits linearly allocated to periods prior to the valuation year based on judicial service. Refunds are valued as the reported Accumulated Deductions as provided by the DPB. The unfunded actuarial liability is the actuarial liability on the valuation date less the actuarial value of assets.

In accordance with Chapter 78, P.L. 2011:

- Beginning with the July 1, 2010 actuarial valuation, the accrued liability contribution shall be computed so that if the contribution is paid annually in level dollars, it will amortize the unfunded accrued liability over an open 30 year period.
- Beginning with the July 1, 2019 actuarial valuation, the accrued liability contribution shall be computed so that if the contribution is paid annually in level dollars, it will amortize the unfunded accrued liability over a closed 30 year period (i.e., for each subsequent actuarial valuation the amortization period shall decrease by one year).
- Beginning with the July 1, 2029 actuarial valuation, when the remaining amortization period reaches 20 years, any increase or decrease in the unfunded accrued liability as a result of actuarial losses or gains for subsequent valuation years shall serve to increase or decrease, respectively, the amortization period for the unfunded accrued liability, unless an increase in the amortization period will cause it to exceed 20 years. If an increase in the amortization period as a result of actuarial losses for a valuation year would exceed 20 years, the accrued liability contribution shall be computed for the valuation year using a 20 year amortization period.

To the extent that the amortization period remains an open period in future years and depending upon the specific circumstances, it should be noted that in the absence of emerging actuarial gains or contributions made in excess of the actuarially determined contribution, any existing unfunded accrued liability may not be fully amortized in the future.



#### APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

#### 2. Asset Valuation Method

For the purposes of determining contribution rates, an actuarial value of assets is used that dampens the volatility in the market value of assets, resulting in a smoother pattern of contributions.

The actuarial value of assets is adjusted to reflect actual contributions, benefit payments and administrative expenses, and an assumed return on the previous year's assets and the current year's cash flow at the prior year's actuarial valuation interest rate, with a further adjustment to reflect 20% of the difference between the resulting value and the actual market value of Plan assets.

### 3. State Contribution Payable Dates

Chapter 83, P.L. 2016 requires the State to make the required pension contributions on a quarterly basis in each fiscal year according to the following schedule: at least 25 percent by September 30, at least 50 percent by December 31, at least 75 percent by March 31, and at least 100 percent by June 30. As such, contributions are assumed to be made on a quarterly basis with the first contribution 15 months after the associated valuation date, with the exception of the FYE 2022 contribution. For FYE 2022 only, we assumed that the entire contribution was made in a single payment on July 1, 2021 based on information provided by the DPB.

#### 4. Valuation Software

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this actuarial valuation.

### 5. Changes in Methods Since the Last Valuation

None.



#### APPENDIX C – SUMMARY OF PLAN PROVISIONS

This summary of Plan provisions provides an overview of the major provisions of the JRS used in the actuarial valuation. It is not intended to replace the more precise language of the NJ State Statutes, Title 43, Chapter 6A, and if there is any difference between the description of the plan herein and the actual language in the NJ State Statutes, the NJ State Statutes will govern.

### 1. Eligibility for Membership

Chief Justice and Associate Justices of the State Supreme Court, and judges of the Appellate Court, Superior Court and Tax Court of the State of New Jersey.

# 2. Plan Year

The 12-month period beginning on July 1 and ending on June 30.

#### 3. Service Credit

A year is credited for each year of service as a public employee in the State of New Jersey. Any service, for which the member did not receive annual salary of at least \$500, shall be excluded. Judicial service credit is based on biweekly pay periods for which member contributions are made to JRS.

### 4. Final Salary

Annual salary received by the member at the time of retirement or other termination of service. (Effective June 30, 1996, Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the Internal Revenue Code.)

#### 5. Accumulated Deductions

The sum of all amounts deducted from the compensation of a member or contributed by him or on his behalf.

#### 6. Interest Credits on Accumulated Deductions

Members receive interest credits while contributing and for the first two years of inactivity. Prior to July 1, 2018, members received interest credits for the entire period of inactivity until retirement or death.

### 7. Employee Contributions

Any member enrolled prior to January 1, 1996 contributes 3% of the difference between current salary and salary for the position on January 18, 1982. Members enrolled on or after January 1, 1996 contribute 3% of their full salary.



### APPENDIX C – SUMMARY OF PLAN PROVISIONS

Chapter 78, P.L. 2011 increases Member Contributions by 9% of salary phased in over a period of seven years beginning October 2011. (The additional 9% of salary was fully recognized in July 2017.)

### a) For Members enrolled prior to January 1, 1996:

- (1) Member contributes 9% (phased in over a period of seven years beginning October 2011) of the salary for that position on January 18, 1982.
- (2) Member contributes 12% (9% of that phased in over a period of seven years beginning October 2011) of the difference between current salary and salary for that position on January 18, 1982.
- b) For members enrolled on or after January 1, 1996, Member contributes 12% (9% of that phased in over a period of seven years beginning October 2011) of full salary.

#### 8. Retirement Allowance

Benefit comprised of a member annuity plus an employer pension.

#### 9. Benefits

#### a) Service Retirements

Mandatory retirement at age 70. Voluntary retirement prior to that age.

Chapter 105, P.L. 2021 removed the mandatory retirement at age 70 for a member who has been appointed by the Governor, with the advice and consent of the Senate, to the position of county prosecutor.

(1) Age 70 and 10 years of judicial service; or

Age 65 and 15 years of judicial service; or

Age 60 and 20 years of judicial service.

Benefit is an annual retirement allowance equal to 75% of final salary.

(2) Age 65 while serving as a judge, 5 consecutive years of judicial service and 15 years in the aggregate of public service; or

Age 60 while serving as a judge, 5 consecutive years of judicial service and 20 years in the aggregate of public service.

Benefit is an annual retirement allowance equal to 50% of final salary.



# APPENDIX C – SUMMARY OF PLAN PROVISIONS

(3) Age 60 while serving as a judge, 5 consecutive years of judicial service and 15 years in the aggregate of public service.

Benefit is an annual retirement allowance equal to 2% of final salary for each year of public service up to 25 years plus 1% of final salary for each year of public service in excess of 25 years.

(4) Age 60 while serving as a judge.

Benefit is an annual retirement allowance equal to 2% of final salary for each year of judicial service up to 25 years plus 1% for each year of public service in excess of 25 years.

### b) Early Retirement

Prior to age 60 while serving as a judge, 5 consecutive years of judicial service and 25 or more years in the aggregate of public service.

Benefit is an annual retirement allowance equal to 2% of final salary for each year of public service up to 25 years plus 1% of final salary for each year of public service in excess of 25 years, actuarially reduced for commencement prior to age 60.

### c) <u>Deferred Retirement</u>

Termination of service prior to age 60, with 5 consecutive years of judicial service and 10 years in the aggregate of public service.

Benefit is a refund of accumulated deductions, or a deferred life annuity beginning at age 60 equal to 2% of final salary for each year of public service up to 25 years, plus 1% of final salary for each year of public service in excess of 25 years.

Chapter 329, P.L. 2021 amended the retirement provisions to permit a Judge serving as Administrative Director of the Courts to apply for deferred retirement and be appointed as Administrative Director of the Courts, if the member is at least 65 years old and has service for 20 years as a judge in any court in New Jersey.

### d) Non-Vested Termination

Termination of service prior to age 60, with less than 5 years of judicial service or less than 10 years in the aggregate of public service.

Benefit is a refund of accumulated deductions.

#### e) Disability Retirement

Physically or otherwise incapacitated for the full and efficient service to State in his judicial capacity and such incapacity is likely to be permanent.

Benefit is an annual retirement allowance of 75% of final salary.



#### APPENDIX C – SUMMARY OF PLAN PROVISIONS

#### f) Death Benefits

- (1) Before Retirement: Death of an active member of the plan. Benefit is equal to:
  - a) Lump sum payment equal to 150% of final salary, also known as the non-contributory group life insurance benefit, plus
  - b) Spousal life annuity of 25% of final salary payable until spouse's remarriage plus 10% (15%) to one (two or more) dependent child(ren). If there is no surviving spouse, or upon death or remarriage, a total of 15% (20%, 30%) of final salary payable to one (two, three or more) dependent child(ren). If there is no surviving spouse or dependent child(ren), 20% (30%) of final salary to one (two) dependent parent(s). If there is no surviving spouse, dependent child(ren) or parent(s), the benefit is a refund of accumulated deductions with credited interest. This is also known as the statutory death benefit.
- (2) After Retirement: Death of a retired member of the plan. The benefit is equal to:
  - a) Lump sum of 25% of final salary for a member retired under service or early retirement. For a member receiving a disability benefit, a lump sum of 150% of final salary if death occurred before the member attained age 60 and 25% of final salary if death occurred after age 60. This is also known as the non-contributory group life insurance benefit, plus
  - b) Spousal life annuity of 25% of final salary adjusted for any previously granted Cost-of-Living Adjustments, or the salary of an active judge in the member's final position at retirement, if larger, payable until spouse's remarriage plus 10% (15%) to one (two or more) dependent child(ren). If there is no surviving spouse, or upon death or remarriage, a total of 15% (20%, 30%) of final salary payable to one (two, three or more) dependent child(ren). This is also known as the statutory death benefit.

# 10. Forms of Payment

In addition to the postretirement death benefits listed above, the member may elect the following forms of payment.

- a) Maximum Option: Single life annuity with a return of the balance of the member accumulated deductions with credited interest.
- b) Option 1: Single life annuity with a return of the balance of the initial reserve.
- c) Option 2: 100% joint and survivor annuity.
- d) Option 3: 50% joint and survivor annuity.
- e) Option 4: Other percentage joint and survivor annuity.
- f) Option A: 100% pop-up joint and survivor annuity.
- g) Option B: 75% pop-up joint and survivor annuity.
- h) Option C: 50% pop-up joint and survivor annuity.
- i) Option D: 25% pop-up joint and survivor annuity



### APPENDIX C – SUMMARY OF PLAN PROVISIONS

### 11. Changes in Plan Provisions Since Last Valuation

Chapter 94, P.L. 2022 removes the restriction on the receipt of retirement annuities by certain members of the Judicial Retirement System who file for deferred retirement. Chapter 31, P.L. 2023 permits a judge who was collecting an annuity from a State-administered retirement system while serving as a judge and deferred retirement to become County Prosecutor or Administrative Director of the Courts between November 1, 2020 and April 3, 2023, to continue to collect that annuity while serving in that position.



# APPENDIX D – DETERMINATION OF DISCOUNT RATE

Table 1 - Projection of the Pension Plan's Fiduciary Net Position

(In Thousands)

| (a) (b) (c) (d) (e)                                 | (f)<br>14,543<br>15,943<br>17,232 | (g) = (a) + (b) + (c) - (d) - (e) + (f) |
|---|-----------------------------------|---|
|   | 15,943<br>17,232                  |   |
| 1 \$ 212,634 \$ 8,504 \$ 69,172 \$ 70,491 \$ 185 \$ | 17,232                            | \$ 234,178                              |
| 2 234,178 8,001 69,004 72,994 192                   |                                   | 253,940                                 |
| 3 253,940 7,544 68,769 75,118 197                   | 10.405                            | 272,169                                 |
| 4 272,169 7,009 68,553 77,346 203                   | 18,407                            | 288,589                                 |
| 5 288,589 6,577 68,155 79,277 208                   | 19,465                            | 303,301                                 |
| 6 303,301 6,087 67,646 81,365 214                   | 20,393                            | 315,847                                 |
| 7 315,847 5,716 66,924 82,555 217                   | 21,199                            | 326,913                                 |
| 8 326,913 5,216 66,791 84,300 221                   | 21,893                            | 336,292                                 |
| 9 336,292 4,750 65,888 85,743 225                   | 22,460                            | 343,422                                 |
| 10 343,422 4,182 64,939 87,662 230                  | 22,849                            | 347,500                                 |
| 11 347,500 3,627 63,448 89,288 235                  | 23,021                            | 348,073                                 |
| 12 348,073 3,132 61,967 90,344 237                  | 22,969                            | 345,560                                 |
| 13 345,560 2,669 60,837 90,997 239                  | 22,726                            | 340,556                                 |
| 14 340,556 2,248 59,773 91,214 240                  | 22,326                            | 333,449                                 |
| 15 333,449 1,826 58,839 91,269 240                  | 21,788                            | 324,392                                 |
| 16 324,392 1,467 57,829 90,759 238                  | 21,133                            | 313,824                                 |
| 17 313,824 1,109 57,000 90,085 237                  | 20,383                            | 301,995                                 |
| 18 301,995 813 56,220 88,864 233                    | 19,566                            | 289,497                                 |
| 19 289,497 618 55,585 86,860 228                    | 18,738                            | 277,350                                 |
| 20 277,350 450 55,170 84,580 222                    | 17,949                            | 266,118                                 |
| 21 266,118 312 54,838 82,020 215                    | 17,238                            | 256,270                                 |
| 22 256,270 233 54,575 79,006 207                    | 16,643                            | 248,509                                 |
| 23 248,509 138 54,432 76,050 199                    | 16,195                            | 243,025                                 |
| 24 243,025 84 54,256 72,792 191                     | 15,917                            | 240,299                                 |
| 25 240,299 67 54,156 69,273 181                     | 15,844                            | 240,911                                 |
| 26 240,911 49 54,120 65,761 172                     | 16,007                            | 245,154                                 |
| 27 245,154 33 54,082 62,259 163                     | 16,423                            | 253,269                                 |
| 28 253,269 11 54,045 58,824 154                     | 17,107                            | 265,454                                 |
| 29 265,454 5 53,995 55,321 144                      | 18,080                            | 282,068                                 |
| 30 282,068 0 53,188 51,866 135                      | 19,340                            | 302,596                                 |
| 31 302,596 0 3,480 48,447 126                       | 19,609                            | 277,111                                 |
| 32 277,111 0 1,245 45,106 117                       | 17,882                            | 251,015                                 |
| 33 251,015 0 1,102 41,849 109                       | 16,164                            | 226,323                                 |
| 34 226,323 0 1,051 38,685 101                       | 14,543                            | 203,131                                 |
| 35 203,131 0 1,003 35,621 92                        | 13,024                            | 181,444                                 |
| 36 181,444 0 952 32,664 85                          | 11,606                            | 161,253                                 |
| 37 161,253 0 901 29,822 77                          | 10,289                            | 142,544                                 |
| 38 142,544 0 848 27,099 70                          | 9,071                             | 125,294                                 |
| 39 125,294 0 794 24,501 63                          | 7,952                             | 109,476                                 |
| 40 109,476 0 740 22,032 57                          | 6,928                             | 95,055                                  |
| 41 95,055 0 685 19,695 51                           | 5,997                             | 81,991                                  |
| 42 81,991 0 630 17,496 45                           | 5,157                             | 70,237                                  |
| 43 70,237 0 575 15,436 40                           | 4,403                             | 59,739                                  |
| 44 59,739 0 520 13,520 35                           | 3,733                             | 50,437                                  |
| 45 50,437 0 466 11,750 30                           | 3,141                             | 42,264                                  |
| 46 42,264 0 414 10,130 26                           | 2,623                             | 35,144                                  |
| 47 35,144 0 364 8,660 22                            | 2,174                             | 29,000                                  |
| 48 29,000 0 317 7,338 19                            | 1,787                             | 23,747                                  |
| 49 23,747 0 273 6,164 16                            | 1,459                             | 19,299                                  |
| 50 19,299 0 233 5,131 13                            | 1,182                             | 15,570                                  |



# APPENDIX D – DETERMINATION OF DISCOUNT RATE

Table 1 - Projection of the Pension Plan's Fiduciary Net Position

(In Thousands)

|    | Projected<br>Beginning<br>Fiduciary Net<br>Position | Projected<br>Member<br>Contributions | Projected<br>Employer<br>Contributions | Projected<br>Benefit<br>Payments | Projected<br>Administrative<br>Expenses | Projected<br>Investment<br>Earnings | Projected Ending<br>Fiduciary Net<br>Position |
|----|---|--------------------------------------|--|----------------------------------|---|-------------------------------------|---|
|    | (a)   | (b)                                  | (c)                                    | (d)                              | (e)                                     | <b>(f)</b>                          | (g) = (a) + (b) + (c) - (d) - (e) + (f)       |
| 51 | 15,570  | 0                                    | 197                                    | 4,233                            | 11                                      | 950                                 | 12,473  |
| 52 | 12,473  | 0                                    | 164                                    | 3,461                            | 9                                       | 759                                 | 9,926   |
| 53 | 9,926   | 0                                    | 195                                    | 2,805                            | 7                                       | 604                                 | 7,914   |
| 54 | 7,914   | 0                                    | 211                                    | 2,253                            | 6                                       | 483                                 | 6,348   |
| 55 | 6,348   | 0                                    | 205                                    | 1,794                            | 5                                       | 388                                 | 5,142   |
| 56 | 5,142   | 0                                    | 188                                    | 1,418                            | 4                                       | 316                                 | 4,225   |
| 57 | 4,225   | 0                                    | 174                                    | 1,112                            | 3                                       | 262                                 | 3,548   |
| 58 | 3,548   | 0                                    | 163                                    | 866                              | 2                                       | 223                                 | 3,065   |
| 59 | 3,065   | 0                                    | 154                                    | 671                              | 2                                       | 196                                 | 2,741   |
| 60 | 2,741   | 0                                    | 146                                    | 519                              | 1                                       | 178                                 | 2,545   |
| 61 | 2,545   | 0                                    | 140                                    | 401                              | 1                                       | 168                                 | 2,451   |
| 62 | 2,451   | 0                                    | 12                                     | 311                              | 1                                       | 161                                 | 2,313   |
| 63 | 2,313   | 0                                    | 8                                      | 242                              | 1                                       | 154                                 | 2,232   |
| 64 | 2,232   | 0                                    | 6                                      | 191                              | 0                                       | 150                                 | 2,197   |
| 65 | 2,197   | 0                                    | 4                                      | 152                              | 0                                       | 149                                 | 2,197   |
| 66 | 2,197   | 0                                    | 2                                      | 123                              | 0                                       | 150                                 | 2,226   |
| 67 | 2,226   | 0                                    | 1                                      | 100                              | 0                                       | 152                                 | 2,279   |
| 68 | 2,279   | 0                                    | 1                                      | 82                               | 0                                       | 157                                 | 2,354   |
| 69 | 2,354   | 0                                    | 1                                      | 68                               | 0                                       | 162                                 | 2,449   |
| 70 | 2,449   | 0                                    | 0                                      | 56                               | 0                                       | 170                                 | 2,562   |
| 71 | 2,562   | 0                                    | 0                                      | 47                               | 0                                       | 178                                 | 2,694   |
| 72 | 2,694   | 0                                    | 0                                      | 38                               | 0                                       | 187                                 | 2,843   |
| 73 | 2,843   | 0                                    | 0                                      | 31                               | 0                                       | 198                                 | 3,010   |
| 74 | 3,010   | 0                                    | 0                                      | 25                               | 0                                       | 210                                 | 3,195   |
| 75 | 3,195   | 0                                    | 0                                      | 19                               | 0                                       | 223                                 | 3,399   |
| 76 | 3,399   | 0                                    | 0                                      | 15                               | 0                                       | 237                                 | 3,621   |
| 77 | 3,621   | 0                                    | 0                                      | 11                               | 0                                       | 253                                 | 3,863   |
| 78 | 3,863   | 0                                    | 0                                      | 8                                | 0                                       | 270                                 | 4,125   |
| 79 | 4,125   | 0                                    | 0                                      | 6                                | 0                                       | 289                                 | 4,407   |
| 80 | 4,407   | 0                                    | 0                                      | 4                                | 0                                       | 308                                 | 4,712   |
| 81 | 4,712   | 0                                    | 0                                      | 3                                | 0                                       | 330                                 | 5,038   |
| 82 | 5,038   | 0                                    | 0                                      | 2                                | 0                                       | 353                                 | 5,389   |
| 83 | 5,389   | 0                                    | 0                                      | 1                                | 0                                       | 377                                 | 5,765   |
| 84 | 5,765   | 0                                    | 0                                      | 1                                | 0                                       | 404                                 | 6,168   |
| 85 | 6,168   | 0                                    | 0                                      | 0                                | 0                                       | 432                                 | 6,599   |
| 86 | 6,599   | 0                                    | 0                                      | 0                                | 0                                       | 462                                 | 7,060   |
| 87 | 7,060   | 0                                    | 0                                      | 0                                | 0                                       | 494                                 | 7,554   |
| 88 | 7,554   | 0                                    | 0                                      | 0                                | 0                                       | 529                                 | 8,083   |
| 89 | 8,083   | 0                                    | 0                                      | 0                                | 0                                       | 566                                 | 8,649   |
| 90 | 8,649   | 0                                    | 0                                      | 0                                | 0                                       | 605                                 | 9,254   |
| 91 | 9,254   | 0                                    | 0                                      | 0                                | 0                                       | 648                                 | 9,902   |
| 92 | 9,902   | 0                                    | 0                                      | 0                                | 0                                       | 693                                 | 10,595  |
| 93 | 10,595  | 0                                    | 0                                      | 0                                | 0                                       | 742                                 | 11,337  |
| 94 | 11,337  | 0                                    | 0                                      | 0                                | 0                                       | 794                                 | 12,130  |
| 95 | 12,130  | 0                                    | 0                                      | 0                                | 0                                       | 849                                 | 12,980  |



# APPENDIX D – DETERMINATION OF DISCOUNT RATE

Table 2 - Actuarial Present Values of Projected Benefit Payments

(In Thousands)

<sup>\*\*</sup> From Table 1 - Projection of the Pension Plan's Fiduciary Net Position, column (d)

| Year     | B<br>Fid | rojected<br>eginning<br>uciary Net<br>Position* | Projected Benefit<br>Payments for<br>current Plan<br>participants** | "Funded" Portion of<br>Benefit Payments | "Unfunded" Portion of Benefit Payments | Present Value of "Funded" Benefit Payments (f) = (d) / | Present Value of "Unfunded" Benefit Payments (g) = (e) / | Present Value of<br>Benefit Payments<br>Using the Single<br>Discount Rate<br>(h) = (c) / |
|----------|----------|---|---|---|--|--|--|--|
| (a)      |          | <b>(b)</b>                                      | (c)   | (d) = (c)  if  (b) >= (c)               | (e) = (c) - (d)                        | (1+7.00%)^[(a)5]                                       | (1+3.65%)^[(a)5]   | (1+7.00%)^[(a)5]   |
| 1        | \$       | 212,634   | \$ 70,491   | \$ 70,491                               | \$ 0                                   | \$ 68,146  | \$ 0   | \$ 68,146  |
| 2        |          | 234,178   | 72,994  | 72,994                                  | 0                                      | 65,949   | 0  | 65,949   |
| 3        |          | 253,940   | 75,118  | 75,118                                  | 0                                      | 63,429   | 0  | 63,429   |
| 4        |          | 272,169   | 77,346  | 77,346                                  | 0                                      | 61,037   | 0  | 61,037   |
| 5        |          | 288,589   | 79,277  | 79,277                                  | 0                                      | 58,468   | 0  | 58,468   |
| 6        |          | 303,301   | 81,365  | 81,365                                  | 0                                      | 56,083   | 0  | 56,083   |
| 7        |          | 315,847   | 82,555  | 82,555                                  | 0                                      | 53,180   | 0  | 53,180   |
| 8        |          | 326,913   | 84,300  | 84,300                                  | 0                                      | 50,751   | 0  | 50,751   |
| 9        |          | 336,292   | 85,743  | 85,743                                  | 0                                      | 48,243   | 0  | 48,243   |
| 10       |          | 343,422   | 87,662  | 87,662                                  | 0                                      | 46,096   | 0  | 46,096   |
| 11       |          | 347,500   | 89,288  | 89,288                                  | 0                                      | 43,880   | 0  | 43,880   |
| 12       |          | 348,073   | 90,344  | 90,344                                  | 0                                      | 41,494   | 0  | 41,494   |
| 13       |          | 345,560   | 90,997  | 90,997                                  | 0                                      | 39,060   | 0  | 39,060   |
| 14       |          | 340,556   | 91,214  | 91,214                                  | 0                                      | 36,591   | 0  | 36,591   |
| 15       |          | 333,449   | 91,269  | 91,269                                  | 0                                      | 34,218   | 0  | 34,218   |
| 16       |          | 324,392   | 90,759  | 90,759                                  | 0                                      | 31,801   | 0  | 31,801   |
| 17       |          | 313,824   | 90,085  | 90,085                                  | 0                                      | 29,500   | 0  | 29,500   |
| 18       |          | 301,995   | 88,864  | 88,864                                  | 0                                      | 27,196   | 0  | 27,196   |
| 19       |          | 289,497   | 86,860  | 86,860                                  | 0                                      | 24,844   | 0  | 24,844   |
| 20       |          | 277,350   | 84,580  | 84,580                                  | 0                                      | 22,609   | 0  | 22,609   |
| 21       |          | 266,118   | 82,020  | 82,020                                  | 0                                      | 20,491   | 0  | 20,491   |
| 22       |          | 256,270   | 79,006  | 79,006                                  | 0                                      | 18,446   | 0  | 18,446   |
| 23       |          | 248,509   | 76,050  | 76,050                                  | 0                                      | 16,594   | 0  | 16,594   |
| 24       |          | 243,025   | 72,792  | 72,792                                  | 0                                      | 14,844   | 0  | 14,844   |
| 25       |          | 240,299   | 69,273  | 69,273                                  | 0                                      | 13,203   | 0  | 13,203   |
| 26       |          | 240,911   | 65,761  | 65,761                                  | 0                                      | 11,713   | 0  | 11,713   |
| 27       |          | 245,154   | 62,259  | 62,259                                  | 0                                      | 10,364   | 0  | 10,364   |
| 28       |          | 253,269   | 58,824  | 58,824                                  | 0                                      | 9,152  | 0  | 9,152  |
| 29       |          | 265,454   | 55,321  | 55,321                                  | 0                                      | 8,044  | 0  | 8,044  |
| 30       |          | 282,068   | 51,866  | 51,866                                  | 0                                      | 7,048  | 0  | 7,048  |
| 31       |          | 302,596   | 48,447  | 48,447                                  | 0                                      | 6,153  | 0  | 6,153  |
| 32       |          | 277,111   | 45,106  | 45,106                                  | 0                                      | 5,354  | 0  | 5,354  |
| 33       |          | 251,015   | 41,849  | 41,849                                  | 0                                      | 4,642  | 0  | 4,642  |
| 34       |          | 226,323   | 38,685  | 38,685                                  | 0                                      | 4,010  | 0  | 4,010  |
| 35       |          | 203,131   | 35,621  | 35,621                                  | 0                                      | 3,451  | 0  | 3,451  |
| 36       |          | 181,444   | 32,664  | 32,664                                  |  | 2,958  |  | 2,958  |
| 37       |          | 161,253   | 29,822  | 29,822                                  | 0                                      | 2,524  | 0  | 2,524  |
| 38       |          | 142,544   | 27,099  | 27,099                                  |  | 2,143  |  | 2,143  |
| 39<br>40 |          | 125,294   | 24,501  | 24,501<br>22,032                        | 0                                      | 1,811<br>1,522   | 0  | 1,811<br>1,522   |
|          |          | 109,476   | 22,032  | · · · · · · · · · · · · · · · · · · ·   | 0                                      |  | 0  |  |
| 41<br>42 |          | 95,055<br>81,991                                | 19,695<br>17,496  | 19,695<br>17,496                        | 0                                      | 1,272<br>1,056   | 0  | 1,272<br>1,056   |
| 43       |          | 70,237  | 15,436  | 15,436                                  | 0                                      | 870  | 0  | 870  |
| 43       |          | 59,739  | 13,520  | 13,520                                  | 0                                      | 712  | 0  | 712  |
| 45       |          |   |   |   | 0                                      | 579  | 0  | 579  |
| 43<br>46 |          | 50,437<br>42,264                                | 11,750<br>10,130  | 11,750<br>10,130                        | 0                                      | 466  | 0  | 466  |
| 46<br>47 |          | 35,144  | 8,660   | 8,660                                   | 0                                      | 373  | 0  | 373  |
| 48       |          | 29,000  | 7,338   | 7,338                                   | 0                                      | 295  | 0  | 295  |
| 48<br>49 |          | 23,747  | 6,164   | 6,164                                   | 0                                      | 232  | 0  | 293  |
| 50       |          | 19,299  | 5,131   | 5,131                                   | 0                                      | 180  | 0  | 180  |
| 30       |          | 19,499  | 5,131   | 3,131                                   | U                                      | 180  | Ü  | 180  |



<sup>\*</sup> From Table 1 - Projection of the Pension Plan's Fiduciary Net Position, column (a)

# APPENDIX D – DETERMINATION OF DISCOUNT RATE

Table 2 - Actuarial Present Values of Projected Benefit Payments

(In Thousands)

<sup>\*</sup> From Table 1 - Projection of the Pension Plan's Fiduciary Net Position, column (a)
\*\* From Table 1 - Projection of the Pension Plan's Fiduciary Net Position, column (d)

| Projected Proj<br>Beginning Pa<br>Fiduciary Net cu | ected Benefit<br>yments for<br>rrent Plan<br>rticipants** | y Net Position, column (d)  "Funded" Portion of Benefit Payments | "Unfunded"<br>Portion of<br>Benefit<br>Payments | Present Value of<br>"Funded" Benefit<br>Payments | Present Value of<br>"Unfunded" Benefit<br>Payments | Present Value of<br>Benefit Payments<br>Using the Single<br>Discount Rate |
|--|---|--|---|--|--|---|
| (b)  | (c)   | (d) = (c)  if  (b) >= (c)  | (e) = (c) - (d)                                 | $(f) = (d) / (1+7.00\%)^{(a)5}$                  | $(g) = (e) / (1+3.65\%)^{(a)}5]$                   | $(h) = (c) / (1+7.00\%)^{(a)}5]$  |
| \$ 15,570 \$                                       | 4,233   | \$ 4,233   | \$ 0  | \$ 139   | \$ 0   | \$ 139  |
| 12,473   | 3,461   | 3,461  | 0   | 106  | 0  | 106   |
| 9,926  | 2,805   | 2,805  | 0   | 80   | 0  | 80  |
| 7,914  | 2,253   | 2,253  | 0   | 60   | 0  | 60  |
| 6,348  | 1,794   | 1,794  | 0   | 45   | 0  | 45  |
| 5,142  | 1,418   | 1,418  | 0   | 33   | 0  | 33  |
| 4,225  | 1,112   | 1,112  | 0   | 24   | 0  | 24  |
| 3,548  | 866   | 866  | 0   | 18   | 0  | 18  |
| 3,065  | 671   | 671  | 0   | 13   | 0  | 13  |
| 2,741  | 519   | 519  | 0   | 9  | 0  | 9   |
| 2,545  | 401   | 401  | 0   | 7  | 0  | 7   |
| 2,451  | 311   | 311  | 0   | 5  | 0  | 5   |
| 2,313  | 242   | 242  | 0   | 4  | 0  | 4   |
| 2,232  | 191   | 191  | 0   | 3  | 0  | 3   |
| 2,197  | 152   | 152  | 0   | 2  | 0  | 2   |
| 2,197  | 123   | 123  | 0   | 1  | 0  | 1   |
| 2,226  | 100   | 100  | 0   | 1  | 0  | 1   |
| 2,279  | 82  | 82   | 0   | 1  | 0  | 1   |
| 2,354  | 68  | 68   | 0   | 1  | 0  | 1   |
| 2,449  | 56  | 56   | 0   | 1  | 0  | 1   |
| 2,562  | 47  | 47   | 0   | 0  | 0  | 0   |
| 2,694  | 38  | 38   | 0   | 0  | 0  | 0   |
| 2,843  | 31  | 31   | 0   | 0  | 0  | 0   |
| 3,010  | 25  | 25   | 0   | 0  | 0  | 0   |
| 3,195  | 19  | 19   | 0   | 0  | 0  | 0   |
| 3,399  | 15  | 15   | 0   | 0  | 0  | 0   |
| 3,621  | 11  | 11   | 0   | 0  | 0  | 0   |
| 3,863  | 8   | 8  | 0   | 0  | 0  | 0   |
| 4,125  | 6   | 6  | 0   | 0  | 0  | 0   |
| 4,407  | 4   | 4  | 0   | 0  | 0  | 0   |
| 4,712  | 3   | 3  | 0   | 0  | 0  | 0   |
| 5,038  | 2   | 2  | 0   | 0  | 0  | 0   |
| 5,389  | 1   | 1  | 0   | 0  | 0  | 0   |
| 5,765  | 1   | 1  | 0   | 0  | 0  | 0   |
| 6,168  | 0   | 0  | 0   | 0  | 0  | 0   |
| 6,599  | 0   | 0  | 0   | 0  | 0  | 0   |
| 7,060  | 0   | 0  | 0   | 0  | 0  | 0   |
| 7,554  | 0   | 0  | 0   | 0  | 0  | 0   |
| 8,083  | 0   | 0  | 0   | 0  | 0  | 0   |
| 8,649  | 0   | 0  | 0   | 0  | 0  | 0   |
| 9,254  | 0   | 0  | 0   | 0  | 0  | 0   |
| 9,902  | 0   | 0  | 0   | 0  | 0  | 0   |
| 10,595   | 0   | 0  | 0   | 0  | 0  | 0   |
|  |   |  |   |  |  | 0   |
| 12,130   | 0   | 0  | 0   |  |  | = \$ 1,073,631  |
| 11,337<br>12,130                                   |   | 0  |   |  | 0 0 00   | 0 0 0 0   |



#### APPENDIX E – GLOSSARY OF TERMS

### 1. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

#### 2. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

#### 3. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

#### 4. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

### 5. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Service Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

#### 6. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the Actuarial Valuation Date to the Measurement Date. The Measurement Date must be the same as the Reporting Date for the plan.



### APPENDIX E – GLOSSARY OF TERMS

### 7. Net Pension Liability

The liability of employers and nonemployer contributing entities for employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position.

### 8. Plan Fiduciary Net Position

The fair or market value of assets.

### 9. Reporting Date

The last day of the plan or employer's fiscal year.

#### 10. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 68. The Service Cost is the normal cost calculated under the entry age actuarial cost method.

# 11. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 68. The Total Pension Liability is the actuarial liability calculated under the entry age actuarial cost method. This measurement generally is not appropriate for estimating the cost to settle the Plan's liabilities.

