

Public Employees Retirement Association of Minnesota

Local Government Correctional Service Retirement Plan

GASB Statements No. 67 and No. 68

Accounting and Financial Reporting for Pensions

June 30, 2023





December 7, 2023

Public Employees Retirement Association of Minnesota
Local Government Correctional Service Retirement Plan
St. Paul, Minnesota

Dear Trustees of the Local Government Correctional Service Retirement Plan:

This report provides accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 for the Local Government Correctional Service Retirement Plan, as amended by GASB Statement No. 82. These calculations have been made on a basis that is consistent with our understanding of these accounting standards.

GASB Statement No. 67 is the accounting standard that applies to the financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust. GASB Statement No. 82 is an amendment to Statements No. 67, No. 68, and No. 73, intended to improve consistency in the application of the accounting standards.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statements No. 67 and No. 68. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligations. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. The calculation of the plan's liability for this report may not be applicable for purposes of funding the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statements No. 67 and No. 68 may produce significantly different results. The information in this report is calculated on a total plan basis. PERA is responsible for preparing the Schedule of Employer Allocations and the Schedule of Pension Amounts by Employer. This report may be provided to parties other than the Public Employees Retirement Association (PERA) only in its entirety and only with the permission of PERA. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by PERA, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different, please let us know. This information was checked for internal consistency, but it was not audited.

This report complements the actuarial valuation report for funding purposes that was or will be provided to the Plan and should be considered in conjunction with that report. Please see the actuarial valuation report as of June 30, 2023 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the Local Government Correctional Service Retirement Plan as of the measurement date. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

Bonita J. Wurst and Sheryl L. Christensen are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Bonita J. Wurst, ASA, EA, FCA, MAAA



Sheryl L. Christensen, FSA, EA, FCA, MAAA

BJW/SLC:rmn



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SECTION A

EXECUTIVE SUMMARY

Executive Summary

as of June 30, 2023 (Dollars in Thousands)

	2023
Actuarial Valuation Date	June 30, 2023
Measurement Date of the Net Pension Liability	June 30, 2023
Employer's Fiscal Year Ending Date (Reporting Date)	Varies by Employer
 Membership	
Number of	
- Service Retirements	1,506
- Survivors	100
- Disability Retirements	237
- Deferred Retirements	4,378
- Terminated Other Non-Vested	2,604
- Active Members	3,786
- Total	12,611
Covered Payroll	\$ 238,319 ⁽¹⁾
 Net Pension Liability	
Total Pension Liability	\$ 1,112,405
Plan Fiduciary Net Position	1,067,200
Net Pension Liability	\$ 45,205
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	95.94%
Net Pension Liability as a Percentage of Covered Payroll	18.97%
 Development of the Single Discount Rate	
Single Discount Rate	7.00%
Long-Term Expected Rate of Investment Return	7.00%
Long-Term Municipal Bond Rate	3.86% ⁽²⁾
Last year ending June 30 in the 2024 to 2123 projection period for which projected benefit payments are fully funded	2123
 Total Pension Expense/(Income)	 \$ 37,261

Deferred Outflows and Inflows by Source Arising from Current and Prior Periods to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 17,411	\$ 3,969
Changes in assumptions	\$ 107,636	\$ 206,231
Net difference between projected and actual earnings on pension plan investments	\$ 85,006	\$ 90,784
Total	\$ 210,053	\$ 300,984

⁽¹⁾ Assumed equal to actual member contributions divided by member contribution rate.

⁽²⁾ Based on the 20-Year Municipal GO Index of mixed maturity general obligation municipal bonds as of the weekly rate closest to but not later than the Measurement Date.



Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans* establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements. Governmental Accounting Standards Board (GASB) Statement No. 82, *Pension Issues*, is an amendment to GASB Statements No. 67, No. 68, and No. 73, intended to improve consistency in the application of the accounting standards.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state and local governmental employers to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 states, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to the Local Government Correctional Service Retirement Plan subsequent to the measurement date of June 30, 2023.

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a Statement of Fiduciary Net Position and a Statement of Changes in Fiduciary Net Position in accordance with GASB Statement No. 67. The *Statement of Fiduciary Net Position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *Statement of Changes in Fiduciary Net Position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.



Notes to Financial Statements

GASB Statement No. 68 requires the notes to the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

Both GASB Statements No. 67 and No. 68 require the notes to the financial statements for the employers and pension plans to include certain descriptive information about the pension plans through which the pension benefits are provided. The list of disclosure items should include:

- A description of benefits provided by the plan;
- The classes of employees and number of members covered by the pension plan;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The pension plan's investment policies;
- The pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- The net pension liability using a discount rate that is 1% higher and 1% lower than the current discount rate used to calculate the total pension liability and net pension liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the total pension liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan's Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- Sources of changes in the net pension liability;
- Information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and
- Comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.



Measurement of the Net Pension Liability

The net pension liability is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if there are no changes in benefits, Chapter 356 required contributions are made, and all actuarial assumptions are met (including the assumption of the plan earning 7.00% on the actuarial value of assets, as prescribed by statutes), it is expected that:

- (1) The normal cost of the plan is expected to remain approximately level as a percent of pay;
- (2) The funded status of the plan is expected to gradually improve and is expected to be 100% funded within the next 30 years; and
- (3) The unfunded liability will grow initially as a dollar amount for 8 years (based on the current 30-year amortization period and if contributions are equal to the required contribution amount) before beginning to decline.

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the market value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction.
- (2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
- (3) The measurement would produce a different result if the actuarial value of assets were used instead of the market value of assets.

Limitation of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. For employer reporting, the net pension liability and pension expense should be measured as of a date (measurement date) no earlier than the end of the employer's prior fiscal year, consistently applied from period to period. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of June 30, 2023 and a measurement date of June 30, 2023.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a single discount rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the long-term expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 3.86% (based on the weekly rate closest to but not later than the measurement date of Fidelity's "20-Year Municipal GO AA Index"); and the resulting single discount rate is 7.00%. PERA staff selected the long-term expected rate of investment return of 7.00% based on input from GRS that the proposed selection would be reasonable for the purpose of the measurement.

SECTION B

FINANCIAL STATEMENTS

Statement of Pension Expense under GASB Statement No. 68

Fiscal Year Ended June 30, 2023 (Dollars in Thousands)

A. Expense

1. Service Cost	\$	45,941
2. Interest on the Total Pension Liability	\$	71,324
3. Current-Period Benefit Changes	\$	141
4. Employee Contributions (made negative for addition here)	\$	(13,894)
5. Projected Earnings on Plan Investments (made negative for addition here)	\$	(63,541)
6. Pension Plan Administrative Expense	\$	434
7. Other Changes in Plan Fiduciary Net Position	\$	-
8. Recognition of Outflow (Inflow) of Resources due to differences between expected and actual experience in the measurement of the Total Pension Liability		
<i>Arising from Current Reporting Period</i>	\$	8,705
9. Recognition of Outflow (Inflow) of Resources due to assumption changes		
<i>Arising from Current Reporting Period</i>	\$	(103,115)
10. Recognition of Outflow (Inflow) of Resources due to the difference between projected (7.50%) and actual earnings on Pension Plan Investments		
<i>Arising from Current Reporting Period</i>	\$	(4,770)
11. Increase/(Decrease) from Experience in the Current Reporting Period	\$	(58,775)
12. Recognition of Outflow (Inflow) of Resources due to differences between expected and actual experience in the measurement of the Total Pension Liability		
<i>Arising from Prior Reporting Periods</i>	\$	(6,989)
13. Recognition of Outflow (Inflow) of Resources due to assumption changes		
<i>Arising from Prior Reporting Periods</i>	\$	107,141
14. Recognition of Outflow (Inflow) of Resources due to the difference between projected and actual earnings on Pension Plan Investments		
<i>Arising from Prior Reporting Periods</i>	\$	(4,116)
15. Total Pension Expense / (Income)	\$	37,261

Recognition of Deferred Outflows and Inflows of Resources

Differences between expected and actual experience and changes in assumptions are recognized in pension expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with pension through the pension plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active employees in the plan was approximately 32,566 years. Additionally, the total plan membership (active employees and inactive employees) was 11,890. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 3.00 years (rounded).

Additionally, differences between projected and actual earnings on plan investments should be recognized in pension expense using a systematic and rational method over a closed five-year period. For this purpose, the deferred outflows and inflows of resources are recognized in the pension expense as a level dollar amount over the closed period identified above.



Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended June 30, 2023 (Dollars in Thousands)

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$	26,116
2. Assumption Changes (gains) or losses	\$	(309,346)
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		3.0000
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$	8,705
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$	(103,115)
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$	(94,410)
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$	17,411
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$	(206,231)
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$	(188,820)

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$	(23,852)
2. Recognition period for Assets {in years}		5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$	(4,770)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$	(19,082)



Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30, 2023 (Dollars in Thousands)

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 116,341	\$ 110,599	\$ 5,742
2. Due to Assets	\$ 31,734	\$ 40,620	\$ (8,886)
3. Total	\$ 148,075	\$ 151,219	\$ (3,144)

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 8,705	\$ 6,989	\$ 1,716
2. Assumption Changes	\$ 107,636	\$ 103,610	\$ 4,026
3. Net Difference between projected and actual earnings on pension plan investments	\$ 31,734	\$ 40,620	\$ (8,886)
4. Total	\$ 148,075	\$ 151,219	\$ (3,144)

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ 17,411	\$ 3,969	\$ 13,442
2. Assumption Changes	\$ 107,636	\$ 206,231	\$ (98,595)
3. Net Difference between projected and actual earnings on pension plan investments	\$ 85,006	\$ 90,784	\$ (5,778)
4. Total	\$ 210,053	\$ 300,984	\$ (90,931)

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2024	\$ 235
2025	\$ (108,327)
2026	\$ 21,932
2027	\$ (4,771)
2028	\$ -
Thereafter	\$ -
Total	\$ (90,931)



Recognition of Deferred Outflows and Inflows of Resources Fiscal Year Ended June 30, 2023 (Dollars in Thousands)

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) Due to Differences Between Expected and Actual Experience on Liabilities					
2020	\$ (12,083)	4.0000	\$ (3,020)	\$ 0	0.0000
2021	\$ (3,822)	4.0000	\$ (955)	\$ (955)	1.0000
2022	\$ (9,042)	3.0000	\$ (3,014)	\$ (3,014)	1.0000
2023	\$ 26,116	3.0000	\$ 8,705	\$ 17,411	2.0000
Total			\$ 1,716	\$ 13,442	
Deferred Outflow (Inflow) Due to Assumption Changes					
2020	\$ (1,977)	4.0000	\$ (495)	\$ 0	0.0000
2021	\$ 137,113	4.0000	\$ 34,278	\$ 34,279	1.0000
2022	\$ 220,073	3.0000	\$ 73,358	\$ 73,357	1.0000
2023	\$ (309,346)	3.0000	\$ (103,115)	\$ (206,231)	2.0000
Total			\$ 4,026	\$ (98,595)	
Deferred Outflow (Inflow) Due to Differences Between Projected and Actual Earnings on Plan Investments					
2019	\$ 671	5.0000	\$ 135	\$ 0	0.0000
2020	\$ 24,475	5.0000	\$ 4,895	\$ 4,895	1.0000
2021	\$ (179,252)	5.0000	\$ (35,850)	\$ (71,702)	2.0000
2022	\$ 133,519	5.0000	\$ 26,704	\$ 80,111	3.0000
2023	\$ (23,852)	5.0000	\$ (4,770)	\$ (19,082)	4.0000
Total			\$ (8,886)	\$ (5,778)	
Deferred Outflow (Inflow) Due to All Sources					
Total			\$ (3,144)	\$ (90,931)	

Statement of Fiduciary Net Position (Dollars in Thousands)

Assets in Trust	Market Value	
	June 30, 2023	June 30, 2022
Cash, equivalents, short term securities	\$ 31,869	\$ 16,177
Fixed income	\$ 223,184	\$ 222,439
Equity	\$ 541,314	\$ 489,555
Private Markets	\$ 270,615	\$ 247,026
Other	\$ -	\$ -
Total Assets in Trust	\$ 1,066,982	\$ 975,197
Assets Receivable	\$ 884	\$ 743
Amounts Payable	\$ (666)	\$ 625
Net Position Restricted for Pensions	\$ 1,067,200	\$ 975,315

Statement of Changes in Fiduciary Net Position (Dollars in Thousands)

Change in Assets	Market Value	
Year Ending	June 30, 2023	June 30, 2022
1. Fund balance at market value at beginning of year	\$ 975,315	\$ 1,035,716
2. Adjustment to match beginning of year asset statement	\$ -	\$ -
3. Fund balance at market value at beginning of year	\$ 975,315	\$ 1,035,716
4. Contributions		
a. Member	\$ 13,894	\$ 12,843
b. Employer	\$ 20,518	\$ 19,227
c. Other sources	\$ -	\$ -
d. Total contributions	\$ 34,412	\$ 32,070
5. Investment income		
a. Investment income/(loss)	\$ 87,753	\$ (62,508)
b. Investment expenses	\$ (360)	\$ (3,507)
c. Net subtotal	\$ 87,393	\$ (66,015)
6. Other	\$ -	\$ -
7. Total additions: (4.d.) + (5.c.) + (6.)	\$ 121,805	\$ (33,945)
8. Benefits Paid		
a. Annuity benefits	\$ (27,117)	\$ (23,372)
b. Refunds	\$ (2,369)	\$ (2,713)
c. Total benefits paid	\$ (29,486)	\$ (26,085)
9. Expenses		
a. Other	\$ -	\$ -
b. Administrative	\$ (434)	\$ (371)
c. Total expenses	\$ (434)	\$ (371)
10. Total deductions: (8.c.) + (9.c.)	\$ (29,920)	\$ (26,456)
11. Net increase (decrease) in net position: (7.) + (10.)	\$ 91,885	\$ (60,401)
12. Net position restricted for pensions	\$ 1,067,200	\$ 975,315
13. State Board of Investment calculated investment return [#]	9.0%	-6.4%

[#] Provided by PERA and calculated by the State Board of Investment.



SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios

Current Period

Fiscal Year Ended June 30, 2023 (Dollars in Thousands)

A. Total pension liability	
1. Service Cost	\$ 45,941
2. Interest on the Total Pension Liability	\$ 71,324
3. Changes of benefit terms	\$ 141
4. Difference between expected and actual experience of the Total Pension Liability**	\$ 26,116
5. Changes of assumptions	\$ (309,346)
6. Benefit payments, including refunds of employee contributions	\$ (29,486)
7. Net change in total pension liability	\$ (195,310)
8. Total pension liability – beginning	\$ 1,307,715
9. Total pension liability – ending	<u>\$ 1,112,405</u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 20,518
2. Contributions – employee	\$ 13,894
3. Net investment income	\$ 87,393
4. Benefit payments, including refunds of employee contributions	\$ (29,486)
5. Pension Plan Administrative Expense	\$ (434)
6. Other	\$ -
7. Net change in plan fiduciary net position	\$ 91,885
8. Plan fiduciary net position – beginning	\$ 975,315
9. Plan fiduciary net position – ending	<u>\$ 1,067,200</u>
C. Net pension liability	<u>\$ 45,205</u>
D. Plan fiduciary net position as a percentage of the total pension liability	95.94%
E. Covered-employee payroll*	\$ 238,319
F. Net pension liability as a percentage of covered-employee payroll	18.97%

* Assumed equal to actual member contributions divided by employee contribution rate.

** Includes impact of changes in expected timing of future post-retirement benefit increases.



Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Multiyear (Dollars in Thousands)

Last 10 Fiscal Years

Fiscal year ending June 30,	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability										
Service Cost	\$ 45,941	\$ 36,877	\$ 32,307	\$ 33,172	\$ 30,362	\$ 45,378	\$ 49,202	\$ 25,950	\$ 25,098	\$ 26,488
Interest on the Total Pension Liability	\$ 71,324	\$ 66,604	\$ 61,462	\$ 57,354	\$ 52,741	\$ 53,811	\$ 47,336	\$ 40,605	\$ 37,043	\$ 33,955
Benefit Changes	\$ 141	\$ -	\$ -	\$ -	\$ -	\$ (66,822)	\$ -	\$ -	\$ -	\$ -
Difference between Expected and Actual Experience	\$ 26,116	\$ (9,042)	\$ (3,822)	\$ (12,083)	\$ (1,846)	\$ 1,018	\$ (3,516)	\$ 382	\$ (7,892)	\$ (5,327)
Assumption Changes	\$ (309,346)	\$ 220,073	\$ 137,113	\$ (1,977)	\$ (2,206)	\$ (209,457)	\$ (66,147)	\$ 310,332	\$ -	\$ (34,168)
Benefit Payments	\$ (27,117)	\$ (23,372)	\$ (20,088)	\$ (17,569)	\$ (15,381)	\$ (13,183)	\$ (11,033)	\$ (9,381)	\$ (7,777)	\$ (6,711)
Refunds	\$ (2,369)	\$ (2,713)	\$ (2,140)	\$ (2,709)	\$ (2,244)	\$ (1,364)	\$ (1,478)	\$ (982)	\$ (1,057)	\$ (1,105)
Net Change in Total Pension Liability	\$ (195,310)	\$ 288,427	\$ 204,832	\$ 56,188	\$ 61,426	\$ (190,619)	\$ 14,364	\$ 366,906	\$ 45,415	\$ 13,132
Total Pension Liability - Beginning	\$ 1,307,715	\$ 1,019,288	\$ 814,456	\$ 758,268	\$ 696,842	\$ 887,461	\$ 873,097	\$ 506,191	\$ 460,776	\$ 447,644
Total Pension Liability - Ending (a)	\$ 1,112,405	\$ 1,307,715	\$ 1,019,288	\$ 814,456	\$ 758,268	\$ 696,842	\$ 887,461	\$ 873,097	\$ 506,191	\$ 460,776
Plan Fiduciary Net Position										
Employer Contributions	\$ 20,518	\$ 19,227	\$ 19,351	\$ 19,043	\$ 18,676	\$ 17,871	\$ 17,489	\$ 16,490	\$ 15,736	\$ 15,054
Employee Contributions	\$ 13,894	\$ 12,843	\$ 12,948	\$ 12,692	\$ 12,485	\$ 11,956	\$ 11,666	\$ 11,008	\$ 10,472	\$ 10,030
Pension Plan Net Investment Income	\$ 87,393	\$ (66,015)	\$ 238,666	\$ 31,774	\$ 50,853	\$ 62,962	\$ 78,363	\$ 209	\$ 20,373	\$ 69,451
Benefit Payments	\$ (27,117)	\$ (23,372)	\$ (20,088)	\$ (17,569)	\$ (15,381)	\$ (13,183)	\$ (11,033)	\$ (9,381)	\$ (7,777)	\$ (6,711)
Refunds	\$ (2,369)	\$ (2,713)	\$ (2,140)	\$ (2,709)	\$ (2,244)	\$ (1,364)	\$ (1,478)	\$ (982)	\$ (1,057)	\$ (1,105)
Pension Plan Administrative Expense	\$ (434)	\$ (371)	\$ (344)	\$ (332)	\$ (361)	\$ (308)	\$ (330)	\$ (290)	\$ (247)	\$ (236)
Other	\$ -	\$ -	\$ 1	\$ -	\$ -	\$ 1	\$ -	\$ (2)	\$ (1)	\$ (1)
Net Change in Plan Fiduciary Net Position	\$ 91,885	\$ (60,401)	\$ 248,394	\$ 42,899	\$ 64,028	\$ 77,935	\$ 94,677	\$ 17,052	\$ 37,499	\$ 86,482
Plan Fiduciary Net Position - Beginning	\$ 975,315	\$ 1,035,716	\$ 787,322	\$ 744,423	\$ 680,395	\$ 602,460	\$ 507,783	\$ 490,731	\$ 453,232	\$ 366,750
Plan Fiduciary Net Position - Ending (b)	\$ 1,067,200	\$ 975,315	\$ 1,035,716	\$ 787,322	\$ 744,423	\$ 680,395	\$ 602,460	\$ 507,783	\$ 490,731	\$ 453,232
Net Pension Liability - Ending (a) - (b)	\$ 45,205	\$ 332,400	\$ (16,428)	\$ 27,134	\$ 13,845	\$ 16,447	\$ 285,001	\$ 365,314	\$ 15,460	\$ 7,544
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	95.94 %	74.58 %	101.61 %	96.67 %	98.17 %	97.64 %	67.89 %	58.16 %	96.95 %	98.36 %
Covered Employee Payroll	\$ 238,319	\$ 220,292	\$ 222,093	\$ 217,702	\$ 214,151	\$ 205,077	\$ 200,103	\$ 188,816	\$ 179,623	\$ 172,041
Net Pension Liability as a Percentage of Covered Employee Payroll	18.97 %	150.89 %	(7.40)%	12.46 %	6.47 %	8.02 %	142.43 %	193.48 %	8.61 %	4.39 %
Notes to Schedule:										
N/A										



Schedules of Required Supplementary Information

Schedule of Net Pension Liability Multiyear (Dollars in Thousands)

Last 10 Fiscal Years

FY Ending June 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 460,776	\$ 453,232	\$ 7,544	98.36%	\$ 172,041	4.39%
2015	\$ 506,191	\$ 490,731	\$ 15,460	96.95%	\$ 179,623	8.61%
2016	\$ 873,097	\$ 507,783	\$ 365,314	58.16%	\$ 188,816	193.48%
2017	\$ 887,461	\$ 602,460	\$ 285,001	67.89%	\$ 200,103	142.43%
2018	\$ 696,842	\$ 680,395	\$ 16,447	97.64%	\$ 205,077	8.02%
2019	\$ 758,268	\$ 744,423	\$ 13,845	98.17%	\$ 214,151	6.47%
2020	\$ 814,456	\$ 787,322	\$ 27,134	96.67%	\$ 217,702	12.46%
2021	\$ 1,019,288	\$ 1,035,716	\$ (16,428)	101.61%	\$ 222,093	-7.40%
2022	\$ 1,307,715	\$ 975,315	\$ 332,400	74.58%	\$ 220,292	150.89%
2023	\$ 1,112,405	\$ 1,067,200	\$ 45,205	95.94%	\$ 238,319	18.97%

Schedule of Contributions Multiyear (Dollars in Thousands)

Last 10 Fiscal Years

FY Ending June 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2014	\$ 14,606	\$ 15,054	\$ (448)	\$ 172,041	8.75%
2015	\$ 13,759	\$ 15,736	\$ (1,977)	\$ 179,623	8.76
2016	\$ 16,446	\$ 16,490	\$ (44)	\$ 188,816	8.73
2017	\$ 17,269	\$ 17,489	\$ (220)	\$ 200,103	8.74
2018	\$ 19,031	\$ 17,871	\$ 1,160	\$ 205,077	8.71
2019	\$ 19,466	\$ 18,676	\$ 790	\$ 214,151	8.72
2020	\$ 19,593	\$ 19,043	\$ 550	\$ 217,702	8.75
2021	\$ 19,167	\$ 19,351	\$ (184)	\$ 222,093	8.71
2022	\$ 13,063	\$ 19,227	\$ (6,164)	\$ 220,292	8.73
2023	\$ 13,251	\$ 20,518	\$ (7,267)	\$ 238,319	8.61

Notes to Schedule of Contributions

Methods and Assumptions Used to Determine Contribution Rates for Fiscal Year Ending June 30, 2023:

Valuation Date	June 30, 2022
Notes	Actuarially determined contribution rates are calculated as of each June 30 and apply to the fiscal year beginning on the day after the measurement date.
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	26 years (30 years when plan is fully funded)
Asset Valuation Method	5-Year smoothed market; no corridor
Inflation	2.25%
Payroll Growth	3.00%
Salary Increases	3.00% to 11.00% including inflation
Investment Rate of Return	7.50%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2021 valuation pursuant to an experience study of the period 2015 - 2019.
Mortality	PUB-2010 annuitant generational Public Safety mortality table projected with mortality improvement scale MP-2021, from a base year of 2010. Male rates adjusted by a factor of 0.98.

Other Information:

Notes	The plan is assumed to pay a 2.00% post-retirement benefit increase for all years. See separate funding report as of June 30, 2022 for additional detail.
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Schedule of Investment Returns Multiyear

Last 10 Fiscal Years

<u>FY Ending June 30,</u>	<u>Annual Return¹</u>
2014	18.6 %
2015	4.4
2016	0.1
2017	15.2
2018	10.4
2019	7.4
2020	4.2
2021	30.2
2022	(6.4)
2023	9.0

¹ Annual money-weighted rate of return, net of investment expenses.

The Minnesota State Board of Investment (SBI) compiled this data and the related investment notes and provided it to PERA for GASB compliance purposes. PERA furnished this information to us for inclusion within this report. We did not audit this information. We are not responsible for its accuracy or completeness.

Rate of Return

For the fiscal year ended June 30, 2023, the annual money-weighted rate of return for the Local Government Correctional Service Retirement Plan was 9.0%. The money-weighted rate of return is a method of calculating period-by-period returns on pension plan investments that adjusts for the changing amounts actually invested. For purposes of this schedule, the money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.

To request additional information about the computation of the annual money-weighted rate of return and the investments for the Minnesota Retirement Systems (including the investments for PERA's defined benefit retirement funds), contact SBI at 60 Empire Drive, Suite 355, St. Paul, Minnesota, 55103, via email at minn.sbi@state.mn.us or telephone at 651.296.3328.



SECTION D

ADDITIONAL FINANCIAL STATEMENT DISCLOSURES

Asset Allocation

Long-Term Expected Return on Plan Assets

The long-term expected rate of return on pension plan investments was determined using a building-block method. Estimates for expected future real rates of return (expected returns, net of inflation) were developed for each asset class using both long-term historical returns and long-term capital market expectation from a number of investment management and consulting organizations. The asset class estimates and the target allocations were then combined to produce a geometric, long-term expected rate of return for the portfolio. Inflation expectations were applied to derive the nominal rate of return for the portfolio. For each major asset class that is included in the pension fund's target asset allocation as of June 30, 2023, these estimates are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return (geometric)</u>
Domestic Equity	33.5%	5.10%
International Equity	16.5%	5.30%
Private Markets	25.0%	5.90%
Fixed Income	25.0%	0.75%
Unallocated Cash	0.0%	0.00%
Total	100%	

The Minnesota State Board of Investment (SBI) compiled this data and the related investment notes and provided it to PERA for GASB compliance purposes. PERA furnished this information to us for inclusion within this report. We did not audit this information. We are not responsible for its accuracy or completeness.

For purposes of this valuation, the long-term expected rate of return assumption is 7.00%. This assumption is based on reviews of inflation and investment return assumptions included in the General Employees Retirement Plan experience study report dated June 29, 2023.

Single Discount Rate

A single discount rate of 7.00% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.00%. The projection of cash flows used to determine this single discount rate assumed that plan member, employer, and state contributions will be made at the current statutory contribution rates. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 7.00%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

(Dollars in Thousands)

	1% Decrease 6.00%	Current Single Discount Rate Assumption 7.00%	1% Increase 8.00%
Total Pension Liability	\$ 1,305,481	\$ 1,112,405	\$ 958,355
Net Position Restricted for Pensions	\$ 1,067,200	\$ 1,067,200	\$ 1,067,200
Net Pension Liability	\$ 238,281	\$ 45,205	\$ (108,845)

For more information on the calculation of the single discount rate, refer to Section G of this report.

Note that we believe the 8.00% interest rate assumption does not comply with the Actuarial Standards of Practice.

GASB Statement No. 68 Reconciliation (Dollars in Thousands)

Current Reporting Period

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)	Current Period		
				Deferred Outflows	Deferred Inflows	Pension Expense*
Balance Beginning of Year	\$ 1,307,715	\$ 975,315	\$ 332,400			
Changes for the Year:						
Service Cost	\$ 45,941		\$ 45,941			\$ 45,941
Interest on Total Pension Liability	71,324		71,324			71,324
Interest on Fiduciary Net Position		\$ 63,541	(63,541)			(63,541)
Changes in Benefit Terms	141		141			141
Liability Experience Gains and Losses	26,116		26,116	\$ 17,411	\$ -	8,705
Changes in Assumptions	(309,346)		(309,346)	-	206,231	(103,115)
Contributions - Employer		20,518	(20,518)			
Contributions - Employees		13,894	(13,894)			(13,894)
Asset Gain/(Loss)		23,852	(23,852)	-	19,082	(4,770)
Benefit Payouts	(29,486)	(29,486)				
Administrative Expenses		(434)	434			434
Other		-	-			-
Net Changes	\$ (195,310)	\$ 91,885	\$ (287,195)	\$ 17,411	\$ 225,313	\$ (58,775)
Balance End of Year	\$ 1,112,405	\$ 1,067,200	\$ 45,205			

* Pension Expense from Experience in the Current Reporting Period.

GASB Statement No. 68 Reconciliation (Dollars in Thousands)

Current and Prior Reporting Periods

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)	Deferred Outflows	Deferred Inflows	Net Deferred Outflows Prior Year	Total Pension Expense*
Balance Beginning of Year	\$ 1,307,715	\$ 975,315	\$ 332,400				
Changes for the Year:							
Service Cost	\$ 45,941		\$ 45,941				\$ 45,941
Interest on Total Pension Liability	71,324		71,324				71,324
Interest on Fiduciary Net Position		\$ 63,541	(63,541)				(63,541)
Changes in Benefit Terms	141		141				141
Liability Experience Gains and Losses	26,116		26,116	\$ 17,411	\$ 3,969	\$ (10,958)	1,716
Changes in Assumptions	(309,346)		(309,346)	107,636	206,231	214,777	4,026
Contributions - Employer		20,518	(20,518)				
Contributions - Employees		13,894	(13,894)				(13,894)
Asset Gain/(Loss)		23,852	(23,852)	85,006	90,784	9,188	(8,886)
Benefit Payouts	(29,486)	(29,486)					
Administrative Expenses		(434)	434				434
Other		-	-				-
Net Changes	\$ (195,310)	\$ 91,885	\$ (287,195)				\$ 37,261
Balance End of Year	\$ 1,112,405	\$ 1,067,200	\$ 45,205	\$ 210,053	\$ 300,984	\$ 213,007	

* Pension Expense from Experience in the Current and Prior Reporting Periods.

Summary of Population Statistics

	Terminated			Recipients			Total
	Actives	Deferred Retirement	Other Non-Vested	Service Retirement	Disability Retirement	Survivor	
Members on July 1, 2022	3,564	4,129	2,480	1,407	223	87	11,890
New members	838						838
Return to active	57	(25)	(32)	0	0	0	0
Terminated non-vested	(351)	0	351	0	0	0	0
Service retirements	(49)	(68)	0	117	0	0	0
Terminated deferred	(176)	176	0	0	0	0	0
Terminated refund/transfer	(84)	(45)	(208)	0	0	0	(337)
Deaths	(3)	(4)	(3)	(18)	(1)	(1)	(30)
New beneficiary	0	0	0	0	0	16	16
Disabled	(10)	0	0	0	10	0	0
Data adjustments	0	215	16	0	5	(2)	234
Net change	222	249	124	99	14	13	721
Members on June 30, 2023	3,786	4,378	2,604	1,506	237	100	12,611

SECTION E

SUMMARY OF BENEFITS

Summary of Plan Provisions

Following is a summary of the major plan provisions used in the valuation of this report. PERA is solely responsible for the validity, accuracy and comprehensiveness of this information. If any of the plan provisions shown below are not accurate and complete, the valuation results may differ significantly from those shown in this report and may require a revision of this report.

Plan year	July 1 through June 30.				
Eligibility	Local government employees in covered correctional service for a county administered jail or correctional facility or in a regional correctional facility administered by multiple counties, who are directly responsible for security, custody and control of persons confined in jail or facility, who are expected to respond to incidents within the jail or facility, and who are not members of the Public Employees Police and Fire Fund.				
Contributions	<p>Shown as a percent of salary:</p> <table style="margin-left: 20px;"> <tr> <td><u>Member</u></td> <td>5.83%</td> </tr> <tr> <td><u>Employer</u></td> <td>8.75%</td> </tr> </table> <p>Member contributions are “picked up” according to the provisions of Internal Revenue Code 414(h).</p> <p>Additional one-time direct state aid payment of \$5,255,535, payable October 1, 2023.</p>	<u>Member</u>	5.83%	<u>Employer</u>	8.75%
<u>Member</u>	5.83%				
<u>Employer</u>	8.75%				
Allowable service	Local Government Correctional Service during which member contributions were made (effective July 1, 1999). May also include certain leaves of absence, military service and periods while temporary Worker’s Compensation is paid.				
Salary	Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes unused annual leaves and sick leave payments, severance payments, Workers’ Compensation benefits and employer-paid flexible spending accounts, cafeteria plans, healthcare expense accounts, day-care expenses, fringe benefits and the cost of insurance coverage.				
Average salary	Average of the five highest successive years of salary. Average Salary is based on all Allowable Service if less than five years.				
Vesting	<table style="margin-left: 20px;"> <tr> <td>Hired before July 1, 2010:</td> <td>100% vested after 3 years of Allowable Service.</td> </tr> <tr> <td>Hired after June 30, 2010:</td> <td>50% vested after 5 years of Allowable Service; 60% vested after 6 years of Allowable Service; 70% vested after 7 years of Allowable Service; 80% vested after 8 years of Allowable Service; 90% vested after 9 years of Allowable Service; and 100% vested after 10 years of Allowable Service.</td> </tr> </table>	Hired before July 1, 2010:	100% vested after 3 years of Allowable Service.	Hired after June 30, 2010:	50% vested after 5 years of Allowable Service; 60% vested after 6 years of Allowable Service; 70% vested after 7 years of Allowable Service; 80% vested after 8 years of Allowable Service; 90% vested after 9 years of Allowable Service; and 100% vested after 10 years of Allowable Service.
Hired before July 1, 2010:	100% vested after 3 years of Allowable Service.				
Hired after June 30, 2010:	50% vested after 5 years of Allowable Service; 60% vested after 6 years of Allowable Service; 70% vested after 7 years of Allowable Service; 80% vested after 8 years of Allowable Service; 90% vested after 9 years of Allowable Service; and 100% vested after 10 years of Allowable Service.				
Retirement					
<u>Normal retirement benefit</u>					
Age/service requirement	Age 55 and vested. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.				
Amount	1.9% of Average Salary for each year of Allowable Service, pro rata for completed months, adjusted for partial vesting if applicable.				



Summary of Plan Provisions (Continued)

Retirement (Concluded)

Early Retirement

Age/service requirement

Age 50 and vested.

Amount

Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date with actuarial reduction to commencement age assuming 3% augmentation to age 55 (2.50% if hired after June 30, 2006). Augmentation adjustment is phased out over a five-year period starting July 1, 2019, resulting in no augmentation adjustment after June 30, 2024.

Form of payment

Life annuity. Actuarially equivalent options are:

25%, 50%, 75% or 100% Joint and Survivor. If a Joint and Survivor benefit is elected and the beneficiary predeceases the annuitant, the annuitant's benefit increases to the Life Annuity amount. This "bounce back" is subsidized by the plan.

Benefit increases

Benefit recipients receive increases each year in January based upon 100% of the current Social Security increase, not less than 1.0% and not more than 2.5%, beginning January 1, 2019. If the funding status declines to 85% for two consecutive years or 80% for one year on a market value of assets basis, the maximum increase will be lowered to 1.5%. If the maximum increase is 1.5%, and the Plans' funding ratio improves to 85% for two consecutive years on a market value of assets basis, then the maximum increase will revert to 2.5%.

A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one month but less than 12 full months as of June 30 will receive a pro rata increase.

An additional one-time, non-compounding benefit increase of 2.5% minus the actual 2024 adjustment, is payable for calendar year 2024 in a lump sum by March 31, 2024, to benefit recipients who have been receiving a benefit for at least 12 full months as of June 30, 2023.

Disability

Duty Disability

Age/service requirement

Member who cannot perform duties as a direct result of a disability relating to an act of duty specific to protecting the property and personal safety of others.

Amount

47.50% of Average Salary plus 1.90% of Average Salary for each year in excess of 25 years of Allowable Service (pro rata for completed months).

Payment begins at disability and ends at age 65 or earlier if disability ceases or death occurs. Benefits may be paid upon re-employment but salary plus benefit cannot exceed current salary of position held at time of disability.

Regular Disability

Age/service requirement

At least one year of Allowable Service and a disability preventing member from performing normal duties that arise out of activities not related to covered employment or while at work; activities related to duties that do not present inherent dangers specific to occupation.



Summary of Plan Provisions (Continued)

Disability (Concluded)	
Amount	Normal Retirement Benefit based on Allowable Service (minimum of 10 years) and Average Salary at disability. Payment begins at disability and ends at age 65 or earlier if disability ceases or death occurs. Benefits may be paid upon re-employment but salary plus benefit cannot exceed current salary of position held at time of disability.
<u>Retirement benefit</u>	
Age/service requirement	Age 65 with continued disability.
Amount	Any optional annuity continues. Otherwise, the larger of the disability benefit paid before age 65 or the normal retirement benefit available at age 65, or an actuarially equivalent optional annuity.
<u>Form of payment</u>	Same as for retirement.
<u>Benefit increases</u>	Same as for retirement.
Death	
<u>Surviving spouse benefit</u>	
Age/service requirement	Vested active member at any age or vested former member age 50 or older who dies before retirement or disability benefit commences. If an active member dies, benefits may commence immediately, regardless of age.
Amount	Surviving spouse receives the 100% joint and survivor benefit using the Normal Retirement formula above. If commencement is prior to age 55, the appropriate early retirement formula described above applies except that one-half the monthly reduction factor is used from age 50 to the commencement age. In lieu of this benefit, the surviving spouse may elect a refund of contributions with interest or an actuarially equivalent term certain annuity (lump sum payable to estate at death).
Benefit increases	Same as for retirement.
<u>Surviving dependent children's benefit</u>	
Age/service requirement	If no surviving spouse, all dependent children (biological or adopted) below age 20 who are dependent for more than half of their support on deceased member.
Amount	Actuarially equivalent to surviving spouse 100% joint and survivor annuity payable to the later of age 20 or five years. The amount is to be proportionally divided among surviving children.



Summary of Plan Provisions (Continued)

Death (Concluded)	
<u>Refund of contributions</u>	
Age/service requirement	Active employee dies and survivor benefits paid are less than member's contributions or a former employee dies before annuity begins.
Amount	If no survivor benefits are paid, the member's contributions with 6.00% interest until June 30, 2011; 4.00% to June 30, 2018; 3.00% thereafter. If survivor benefits are paid and accumulated contributions exceed total payments to the surviving spouse and children, then the remaining contributions are paid out.
<hr/>	
Termination	
<u>Refund of contributions</u>	
Age/service requirement	Termination of local government service.
Amount	Member's contributions with 6.00% interest through June 30, 2011. Beginning July 1, 2011, a member's contributions increase at 4.00% interest. Beginning July 1, 2018, a member's contributions increase at 3.00% interest. If a member is vested, a deferred annuity may be elected in lieu of a refund.
<u>Deferred benefit</u>	
Age/service requirement	Partially or fully vested.
Amount	Benefit computed under law in effect at termination and increased by the following percentage (augmentation), compounded annually, if termination of employment is prior to January 1, 2012: (a.) 3.00% (2.50% if hired after June 30, 2006) until the earlier of January 1 of the year following attainment of age 55 and January 1, 2012; (b.) 5.00% (2.50% if hired after June 30, 2006) thereafter until the earlier of the date the annuity begins and January 1, 2012; (c.) 1.00% from January 1, 2012 through December 31, 2018; and (d.) 0.00% thereafter. If a member terminates employment after 2011, they are not eligible for augmentation.
<u>Form of payment</u>	Same as for retirement.
<hr/>	
Actuarial equivalent factors	Effective July 1, 2019, actuarially equivalent factors based on the RP-2014 mortality table for healthy annuitants for a member turning age 55 in 2021, reflecting projected mortality improvements using Scale MP-2017, male rates multiplied by 0.96, blended 65% males, 4.88% post-retirement interest, and 7.5% pre-retirement interest. Reflecting statutory requirements, joint and survivor factors are based on an interest assumption of 6.50%.



Summary of Plan Provisions (Concluded)

Combined service annuity

Members are eligible for combined service benefits if they:

- (a.) Meet minimum retirement age for each plan participated in and total public service meets the vesting requirements of each plan;
or
- (b.) Have three or more years of service under PERA and the covered fund(s) (if hired prior to July 1, 2010).

Other requirements for combined service include:

- (a.) Member must have at least six months of allowable service credit in each plan worked under; and
- (b.) Member may not be in receipt of a benefit from another plan.

Members who meet the above requirements must have their benefit based on the following:

- (a.) Allowable service in all covered plans is combined in order to determine eligibility for early retirement.
- (b.) Average salary is based on the high five consecutive years during their entire service in all covered plans.

Changes in plan provisions

Additional one-time direct state aid contribution of \$5.3 million will be contributed to the Plan on October 1, 2023.

A one-time, non-compounding benefit increase of 2.5% minus the actual 2024 adjustment will be payable in a lump sum for calendar year 2024 by March 31, 2024.

The maximum benefit increase will revert back to 2.5%, if the maximum increase is 1.5% and the Plan's funding ratio improves to 85% for two consecutive years on a market value of assets basis.

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Actuarial Methods Used for the Determination of Total Pension Liability and Related Values

Actuarial Cost Method

Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Total Pension Liability.

Valuation of Future Post-Retirement Benefit Increases

Benefit increases after retirement will equal 100% of the Social Security Cost of Living Adjustment, not less than 1.0% and not more than 2.50%, beginning January 1, 2019. Stochastic modeling was used to determine the assumption that benefit increases will equal 2.00% per year. This is only an assumption; actual increases will depend on actual experience. If the funding status on a market value basis declines to 85% for two consecutive years or 80% for one year, the maximum increase will be lowered to 1.50%. Effective July 1, 2023, the maximum benefit increase will revert back to 2.5%, if the maximum increase is 1.5% and the Plan's funding ratio improves to 85% for two consecutive years on a market value of assets basis.

To determine an assumption regarding a future change in the post-retirement benefit increase, we performed a projection of liabilities and assets based on the following methods and assumptions:

- Future investment returns of 7.00%.
- Liabilities and normal cost based on statutory funding assumptions.
- Open group; stable active population (new member profile based on average new members hired in recent years).

Based on these assumptions and methods, the projection indicates that this plan is not expected to deteriorate to the funding ratio threshold required to lower the maximum benefit increase to 1.50%.

Asset Valuation Method

Fair value of assets.



Summary of Actuarial Assumptions Used for the Determination of Total Pension Liability and Related Values

The following assumptions were used in valuing the liabilities and benefits under the Plan. Unless noted otherwise, the assumptions prescribed are based on the experience study dated July 10, 2020, and a review of inflation and investment assumptions in the General Employees Retirement Plan Experience Study dated June 29, 2023. The Allowance for Combined Service Annuity assumptions are based on an analysis completed by the LCPR actuary and documented in a report dated October 2016.

Investment return	7.00% per annum.								
Single Discount Rate	7.00% per annum.								
Benefit increases after retirement	2.00% per annum.								
Salary increases	Reported salary at valuation date increased according to the rate table to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for members with less than one year of service earned during the year.								
Inflation	2.25% per year.								
Payroll growth	3.00% per year.								
Mortality rates									
Healthy pre-retirement	Pub-2010 Public Safety Mortality Table adjusted for mortality improvements using projection scale MP-2021.								
Healthy post-retirement	Pub-2010 Healthy Retired Public Safety Mortality Table adjusted for mortality improvements using projection scale MP-2021. Male rates are adjusted by a factor of 0.98.								
Disabled	Pub-2010 Public Safety Disabled Retiree Mortality Table, adjusted for mortality improvements using projection scale MP-2021. Male rates are adjusted by a factor of 1.05.								
Notes	The Pub-2010 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 18 to 80 and the annuitant mortality table contains mortality rates for ages 50 to 120. We have extended the annuitant mortality table as needed for members and beneficiaries younger than age 50 who are receiving a benefit by deriving rates based on the employee table and the juvenile table. Similarly, we have extended the employee table as needed for members older than age 80 by deriving rates based on the annuitant table.								
Retirement	Members retiring from active status are assumed to retire according to the age related rates shown in the rate table. Members who have attained the highest assumed retirement age are assumed to retire in one year. Note that plan changes reflected in this report may result in behavior changes that are not anticipated in the current retirement rates.								
Withdrawal	Select and Ultimate rates based on actual experience. Ultimate rates after the third year are shown in the rate table. Select rates in the first three years are:								
	<table border="0"> <thead> <tr> <th style="text-align: center;"><u>Year</u></th> <th style="text-align: center;"><u>Select Withdrawal Rates</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">27%</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">23%</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">17%</td> </tr> </tbody> </table>	<u>Year</u>	<u>Select Withdrawal Rates</u>	1	27%	2	23%	3	17%
<u>Year</u>	<u>Select Withdrawal Rates</u>								
1	27%								
2	23%								
3	17%								



Summary of Actuarial Assumptions (Continued)

Disability	Age-related rates based on experience; see table of sample rates. All incidences are assumed to be duty-related.
Allowance for combined service annuity	Liabilities for former members are increased by 35.0% for vested members and 1.0% for non-vested members to account for the effect of some participants having eligibility for a Combined Service Annuity.
Administrative expenses	In the valuation year, equal to prior year administrative expenses expressed as percentage of prior year projected payroll. In each subsequent year, equal to the initial administrative expense percentage applied to payroll for the closed group.
Refund of contributions	For non-vested members, account balances accumulate interest until the assumed commencement date and are discounted back to the valuation date. Active members decrementing after becoming eligible for a benefit are assumed to take the contributions accumulated with interest if larger than the value of the benefit.
Commencement of deferred benefits	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 55.
Percentage married	75% of active members are assumed to be married. Actual marital status is used for members in payment status.
Age of spouse	Females are assumed to be three years younger than their male spouses. For members in payment status, actual spouse date of birth is used, if provided.
Eligible children	Retiring members are assumed to have no dependent children.
Form of payment	<p>Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows:</p> <p style="margin-left: 40px;">Males: 10% elect 25% Joint & Survivor option 15% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 50% elect 100% Joint & Survivor option</p> <p style="margin-left: 40px;">Females: 10% elect 25% Joint & Survivor option 10% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 25% elect 100% Joint & Survivor option</p> <p>Remaining married members and unmarried members are assumed to elect the Straight Life option.</p> <p>Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.</p>
Eligibility testing	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Decrement operation	Withdrawal decrements do not operate during retirement eligibility. Decrement are assumed to occur mid-fiscal year.
Service credit accruals	It is assumed that members accrue one year of service credit per year.
Pay increases	Pay increases are assumed to happen at the beginning of the fiscal year. This is equivalent to assuming that reported earnings are pensionable earnings for the year ending on the valuation date.



Summary of Actuarial Assumptions (Continued)

Unknown data for certain members	<p>To prepare this report, GRS has used and relied on participant data supplied by the Fund. Although GRS has reviewed the data in accordance with Actuarial Standards of Practice No. 23, GRS has not verified or audited any of the data or information provided.</p> <p>In cases where submitted data was missing or incomplete, the following assumptions, based on average results for applicable members, were applied:</p> <p><u>Data for active members:</u> There were 128 members reported with a salary less than \$100 after annualization. We used prior year salary (63 members), if available; otherwise high five salary with a 10% load to account for salary increases (61 members). If neither prior year salary nor high five salary was available, we assumed a value of \$43,000 (4 members).</p> <p>There were also 162 members reported without a gender. We assumed male gender. There were also 8 members reported without a date of birth. We assumed these members were hired at age 30.</p> <p><u>Data for terminated members:</u> We calculated benefits for these members using the reported Average Salary and credited service. If credited service was not reported (35 members), we used elapsed time from hire date to termination date (18 members); if elapsed time was not available, we assumed four years of service. If termination date was invalid or not reported (18 members), we assumed the termination date was equal to the hire date plus credited service, otherwise the valuation date. If Average Salary was not reported (27 members), we assumed a value of \$24,000. If the reported termination date occurs prior to the reported hire date, the two dates were swapped.</p> <p><u>Data for retired members:</u> There were 4 members reported without a gender; male was assumed. There were no members reported without a date of birth or benefit.</p> <p>Because PERA reclassifies disabled members as retirees once the member reaches Normal Retirement Age, we compare the members that PERA reports as retirees to our disabled group from the last valuation. If a member was disabled in the prior valuation, we reclassify that member as a disabled retiree in this year's valuation. We reclassified 104 retirees as disabled retirees in this valuation.</p>
Changes in actuarial assumptions	<p>The investment return rate was changed from 6.50% to 7.00%.</p> <p>The Single Discount Rate was changed from 5.42% to 7.00%.</p>



Summary of Actuarial Assumptions (Continued)

Percentage of Members Dying Each Year*						
Age in 2023	Healthy Post- Retirement Mortality**		Healthy Pre- Retirement Mortality**		Disability Mortality**	
	Male	Female	Male	Female	Male	Female
	20	0.04%	0.02%	0.04%	0.02%	0.13%
25	0.04	0.02	0.04	0.02	0.13	0.08
30	0.06	0.04	0.06	0.04	0.18	0.12
35	0.07	0.05	0.07	0.05	0.22	0.17
40	0.09	0.06	0.08	0.06	0.25	0.20
45	0.13	0.08	0.09	0.07	0.28	0.22
50	0.18	0.14	0.11	0.08	0.35	0.28
55	0.29	0.25	0.17	0.12	0.48	0.45
60	0.51	0.46	0.27	0.17	0.79	0.72
65	0.87	0.73	0.41	0.22	1.25	1.01
70	1.42	1.16	0.71	0.40	1.85	1.40
75	2.45	2.00	1.27	0.79	3.01	2.13
80	4.45	3.60	2.38	1.63	5.23	3.60
85	8.17	6.42	7.47	5.62	8.83	6.42
90	14.50	11.25	14.80	11.25	15.54	11.25

* Generally, mortality rates are expected to increase as age increases (with the exception of young ages, where expected mortality may decrease as age increases). In cases where the application of the projection scale would reverse the nature of this trend, standard mortality rates have been adjusted slightly. The adjustment has no material effect on these results.

** Rates are adjusted for mortality improvement using Scale MP-2021, from a base year of 2010.

Age	Rates of			
	Withdrawal Rates		Disability Retirement	
	Male	Female	Male	Female
20	17.00%	17.00%	0.04%	0.04%
25	17.00	17.00	0.06	0.06
30	11.00	13.00	0.10	0.08
35	7.50	9.00	0.18	0.17
40	5.50	6.50	0.21	0.18
45	3.50	4.75	0.31	0.39
50	3.00	3.00	0.55	0.70
55	0.00	0.00	0.78	0.93
60	0.00	0.00	0.92	1.30
65	0.00	0.00	1.00	1.30

Summary of Actuarial Assumptions (Concluded)

Age	Retirement Rate	Salary Scale	
		Age	Increase
50	5%	20	11.00%
51	5	25	7.75
52	5	30	6.00
53	5	35	5.50
54	7	40	4.75
55	15	45	4.00
56	10	50	3.75
57	11	55	3.50
58	11	60	3.00
59	11	65	3.00
60	15	70+	3.00
61	15		
62	25		
63	25		
64	30		
65	40		
66	50		
67	40		
68	30		
69	40		
70+	100		

SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the Fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the long-term expected rate of return is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The *Single Discount Rate* (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this calculation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 3.86%; and **the resulting single discount rate is 7.00%**.

If the funding status based on the market value of assets declines to 85% for two consecutive years or 80% for one year, the maximum increase of 2.50% will be lowered to 1.50%. Effective July 1, 2023, the maximum benefit increase will revert back to 2.5%, if the maximum increase is 1.5% and the Plan's funding ratio improves to 85% for two consecutive years on a market value of assets basis. The benefit payments in this projection are based on the assumption that benefit increases (currently subject to a maximum of 2.50%) will equal 2.00% per year.

The tables in this section provide background for the development of the single discount rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Single Discount Rate Development Projection of Contributions (Dollars in Thousands)

Fiscal Year Ending	Payroll			Projected Contributions			
	Payroll for Current Employees	Payroll for New Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for Current Employees	Contributions on Future Payroll Toward Current UAL*	Total Contributions
2023	\$ 238,319	\$ -	\$ 238,319				
2024	\$ 237,915	\$ 10,921	\$ 248,836	\$ 13,870	\$ 26,073	\$ 72	\$ 40,015
2025	\$ 219,605	\$ 36,696	\$ 256,301	\$ 12,803	\$ 19,215	\$ 242	\$ 32,260
2026	\$ 206,187	\$ 57,804	\$ 263,991	\$ 12,021	\$ 18,041	\$ 382	\$ 30,444
2027	\$ 195,321	\$ 76,589	\$ 271,910	\$ 11,387	\$ 17,091	\$ 505	\$ 28,983
2028	\$ 185,457	\$ 94,611	\$ 280,068	\$ 10,812	\$ 16,227	\$ 624	\$ 27,663
2029	\$ 176,377	\$ 112,093	\$ 288,470	\$ 10,283	\$ 15,433	\$ 740	\$ 26,456
2030	\$ 167,891	\$ 129,233	\$ 297,124	\$ 9,788	\$ 14,690	\$ 853	\$ 25,331
2031	\$ 159,786	\$ 146,251	\$ 306,037	\$ 9,316	\$ 13,981	\$ 965	\$ 24,262
2032	\$ 151,984	\$ 163,234	\$ 315,218	\$ 8,861	\$ 13,299	\$ 1,077	\$ 23,237
2033	\$ 144,536	\$ 180,139	\$ 324,675	\$ 8,426	\$ 12,647	\$ 1,189	\$ 22,262
2034	\$ 137,335	\$ 197,080	\$ 334,415	\$ 8,007	\$ 12,017	\$ 1,301	\$ 21,325
2035	\$ 130,297	\$ 214,151	\$ 344,448	\$ 7,596	\$ 11,401	\$ 1,413	\$ 20,410
2036	\$ 123,432	\$ 231,349	\$ 354,781	\$ 7,196	\$ 10,800	\$ 1,527	\$ 19,523
2037	\$ 116,745	\$ 248,680	\$ 365,425	\$ 6,806	\$ 10,215	\$ 1,641	\$ 18,662
2038	\$ 110,291	\$ 266,096	\$ 376,387	\$ 6,430	\$ 9,650	\$ 1,756	\$ 17,836
2039	\$ 104,000	\$ 283,679	\$ 387,679	\$ 6,063	\$ 9,100	\$ 1,872	\$ 17,035
2040	\$ 97,779	\$ 301,530	\$ 399,309	\$ 5,701	\$ 8,556	\$ 1,990	\$ 16,247
2041	\$ 91,636	\$ 319,653	\$ 411,289	\$ 5,342	\$ 8,018	\$ 2,110	\$ 15,470
2042	\$ 85,564	\$ 338,063	\$ 423,627	\$ 4,988	\$ 7,487	\$ 2,231	\$ 14,706
2043	\$ 79,635	\$ 356,701	\$ 436,336	\$ 4,643	\$ 6,968	\$ 2,354	\$ 13,965
2044	\$ 73,787	\$ 375,639	\$ 449,426	\$ 4,302	\$ 6,456	\$ 2,479	\$ 13,237
2045	\$ 67,971	\$ 394,938	\$ 462,909	\$ 3,963	\$ 5,947	\$ 2,607	\$ 12,517
2046	\$ 62,279	\$ 414,517	\$ 476,796	\$ 3,631	\$ 5,449	\$ 2,736	\$ 11,816
2047	\$ 56,685	\$ 434,415	\$ 491,100	\$ 3,305	\$ 4,960	\$ 2,867	\$ 11,132
2048	\$ 51,270	\$ 454,563	\$ 505,833	\$ 2,989	\$ 4,486	\$ 3,000	\$ 10,475
2049	\$ 46,086	\$ 474,922	\$ 521,008	\$ 2,687	\$ 4,032	\$ 3,134	\$ 9,853
2050	\$ 41,120	\$ 495,518	\$ 536,638	\$ 2,397	\$ 3,598	\$ 3,270	\$ 9,265
2051	\$ 36,398	\$ 516,339	\$ 552,737	\$ 2,122	\$ 3,185	\$ 3,408	\$ 8,715
2052	\$ 31,889	\$ 537,431	\$ 569,320	\$ 1,859	\$ 2,790	\$ 3,547	\$ 8,196
2053	\$ 27,676	\$ 558,723	\$ 586,399	\$ 1,613	\$ 2,422	\$ 3,688	\$ 7,723
2054	\$ 23,743	\$ 580,248	\$ 603,991	\$ 1,384	\$ 2,078	\$ 3,830	\$ 7,292
2055	\$ 20,080	\$ 602,031	\$ 622,111	\$ 1,171	\$ 1,757	\$ 3,973	\$ 6,901
2056	\$ 16,754	\$ 624,020	\$ 640,774	\$ 977	\$ 1,466	\$ 4,119	\$ 6,562
2057	\$ 13,781	\$ 646,216	\$ 659,997	\$ 803	\$ 1,206	\$ 4,265	\$ 6,274
2058	\$ 11,178	\$ 668,619	\$ 679,797	\$ 652	\$ 978	\$ 4,413	\$ 6,043
2059	\$ 8,924	\$ 691,267	\$ 700,191	\$ 520	\$ 781	\$ 4,562	\$ 5,863
2060	\$ 7,000	\$ 714,197	\$ 721,197	\$ 408	\$ 612	\$ 4,714	\$ 5,734
2061	\$ 5,380	\$ 737,453	\$ 742,833	\$ 314	\$ 471	\$ 4,867	\$ 5,652
2062	\$ 4,022	\$ 761,096	\$ 765,118	\$ 234	\$ 352	\$ 5,023	\$ 5,609
2063	\$ 2,919	\$ 785,152	\$ 788,071	\$ 170	\$ 255	\$ 5,182	\$ 5,607
2064	\$ 2,052	\$ 809,662	\$ 811,714	\$ 120	\$ 180	\$ 5,344	\$ 5,644
2065	\$ 1,385	\$ 834,680	\$ 836,065	\$ 81	\$ 121	\$ 5,509	\$ 5,711
2066	\$ 892	\$ 860,255	\$ 861,147	\$ 52	\$ 78	\$ 5,678	\$ 5,808
2067	\$ 548	\$ 886,433	\$ 886,981	\$ 32	\$ 48	\$ 5,850	\$ 5,930
2068	\$ 323	\$ 913,268	\$ 913,591	\$ 19	\$ 28	\$ 6,028	\$ 6,075
2069	\$ 180	\$ 940,819	\$ 940,999	\$ 10	\$ 16	\$ 6,209	\$ 6,235
2070	\$ 93	\$ 969,136	\$ 969,229	\$ 5	\$ 8	\$ 6,396	\$ 6,409
2071	\$ 45	\$ 998,260	\$ 998,305	\$ 3	\$ 4	\$ 6,589	\$ 6,596
2072	\$ 20	\$ 1,028,235	\$ 1,028,255	\$ 1	\$ 2	\$ 6,786	\$ 6,789
2073	\$ 7	\$ 1,059,095	\$ 1,059,102	\$ -	\$ 1	\$ 6,990	\$ 6,991

* Equal to total contributions (14.58% of payroll for new employees) net of normal cost and expenses (13.92% of payroll for members hired after June 30, 2023), not less than 0.00%.



Single Discount Rate Development

Projection of Contributions (Dollars in Thousands) (Concluded)

Fiscal Year Ending	Payroll			Projected Contributions			
	Payroll for Current Employees	Payroll for New Employees	Total Employee Payroll	Contributions from Current Employees	Contributions for Current Employees	Contributions on Future Payroll Toward Current UAL*	Total Contributions
2074	\$ 2	\$ 1,090,873	\$ 1,090,875	\$ -	\$ -	\$ 7,200	\$ 7,200
2075	\$ -	\$ 1,123,602	\$ 1,123,602	\$ -	\$ -	\$ 7,416	\$ 7,416
2076	\$ -	\$ 1,157,310	\$ 1,157,310	\$ -	\$ -	\$ 7,638	\$ 7,638
2077	\$ -	\$ 1,192,029	\$ 1,192,029	\$ -	\$ -	\$ 7,867	\$ 7,867
2078	\$ -	\$ 1,227,790	\$ 1,227,790	\$ -	\$ -	\$ 8,103	\$ 8,103
2079	\$ -	\$ 1,264,623	\$ 1,264,623	\$ -	\$ -	\$ 8,347	\$ 8,347
2080	\$ -	\$ 1,302,562	\$ 1,302,562	\$ -	\$ -	\$ 8,597	\$ 8,597
2081	\$ -	\$ 1,341,639	\$ 1,341,639	\$ -	\$ -	\$ 8,855	\$ 8,855
2082	\$ -	\$ 1,381,888	\$ 1,381,888	\$ -	\$ -	\$ 9,120	\$ 9,120
2083	\$ -	\$ 1,423,345	\$ 1,423,345	\$ -	\$ -	\$ 9,394	\$ 9,394
2084	\$ -	\$ 1,466,045	\$ 1,466,045	\$ -	\$ -	\$ 9,676	\$ 9,676
2085	\$ -	\$ 1,510,026	\$ 1,510,026	\$ -	\$ -	\$ 9,966	\$ 9,966
2086	\$ -	\$ 1,555,327	\$ 1,555,327	\$ -	\$ -	\$ 10,265	\$ 10,265
2087	\$ -	\$ 1,601,987	\$ 1,601,987	\$ -	\$ -	\$ 10,573	\$ 10,573
2088	\$ -	\$ 1,650,047	\$ 1,650,047	\$ -	\$ -	\$ 10,890	\$ 10,890
2089	\$ -	\$ 1,699,548	\$ 1,699,548	\$ -	\$ -	\$ 11,217	\$ 11,217
2090	\$ -	\$ 1,750,535	\$ 1,750,535	\$ -	\$ -	\$ 11,554	\$ 11,554
2091	\$ -	\$ 1,803,051	\$ 1,803,051	\$ -	\$ -	\$ 11,900	\$ 11,900
2092	\$ -	\$ 1,857,142	\$ 1,857,142	\$ -	\$ -	\$ 12,257	\$ 12,257
2093	\$ -	\$ 1,912,856	\$ 1,912,856	\$ -	\$ -	\$ 12,625	\$ 12,625
2094	\$ -	\$ 1,970,242	\$ 1,970,242	\$ -	\$ -	\$ 13,004	\$ 13,004
2095	\$ -	\$ 2,029,349	\$ 2,029,349	\$ -	\$ -	\$ 13,394	\$ 13,394
2096	\$ -	\$ 2,090,230	\$ 2,090,230	\$ -	\$ -	\$ 13,796	\$ 13,796
2097	\$ -	\$ 2,152,937	\$ 2,152,937	\$ -	\$ -	\$ 14,209	\$ 14,209
2098	\$ -	\$ 2,217,525	\$ 2,217,525	\$ -	\$ -	\$ 14,636	\$ 14,636
2099	\$ -	\$ 2,284,051	\$ 2,284,051	\$ -	\$ -	\$ 15,075	\$ 15,075
2100	\$ -	\$ 2,352,572	\$ 2,352,572	\$ -	\$ -	\$ 15,527	\$ 15,527
2101	\$ -	\$ 2,423,149	\$ 2,423,149	\$ -	\$ -	\$ 15,993	\$ 15,993
2102	\$ -	\$ 2,495,844	\$ 2,495,844	\$ -	\$ -	\$ 16,473	\$ 16,473
2103	\$ -	\$ 2,570,719	\$ 2,570,719	\$ -	\$ -	\$ 16,967	\$ 16,967
2104	\$ -	\$ 2,647,841	\$ 2,647,841	\$ -	\$ -	\$ 17,476	\$ 17,476
2105	\$ -	\$ 2,727,276	\$ 2,727,276	\$ -	\$ -	\$ 18,000	\$ 18,000
2106	\$ -	\$ 2,809,094	\$ 2,809,094	\$ -	\$ -	\$ 18,540	\$ 18,540
2107	\$ -	\$ 2,893,367	\$ 2,893,367	\$ -	\$ -	\$ 19,096	\$ 19,096
2108	\$ -	\$ 2,980,168	\$ 2,980,168	\$ -	\$ -	\$ 19,669	\$ 19,669
2109	\$ -	\$ 3,069,573	\$ 3,069,573	\$ -	\$ -	\$ 20,259	\$ 20,259
2110	\$ -	\$ 3,161,660	\$ 3,161,660	\$ -	\$ -	\$ 20,867	\$ 20,867
2111	\$ -	\$ 3,256,510	\$ 3,256,510	\$ -	\$ -	\$ 21,493	\$ 21,493
2112	\$ -	\$ 3,354,205	\$ 3,354,205	\$ -	\$ -	\$ 22,138	\$ 22,138
2113	\$ -	\$ 3,454,831	\$ 3,454,831	\$ -	\$ -	\$ 22,802	\$ 22,802
2114	\$ -	\$ 3,558,476	\$ 3,558,476	\$ -	\$ -	\$ 23,486	\$ 23,486
2115	\$ -	\$ 3,665,231	\$ 3,665,231	\$ -	\$ -	\$ 24,191	\$ 24,191
2116	\$ -	\$ 3,775,187	\$ 3,775,187	\$ -	\$ -	\$ 24,916	\$ 24,916
2117	\$ -	\$ 3,888,443	\$ 3,888,443	\$ -	\$ -	\$ 25,664	\$ 25,664
2118	\$ -	\$ 4,005,096	\$ 4,005,096	\$ -	\$ -	\$ 26,434	\$ 26,434
2119	\$ -	\$ 4,125,249	\$ 4,125,249	\$ -	\$ -	\$ 27,227	\$ 27,227
2120	\$ -	\$ 4,249,007	\$ 4,249,007	\$ -	\$ -	\$ 28,043	\$ 28,043
2121	\$ -	\$ 4,376,477	\$ 4,376,477	\$ -	\$ -	\$ 28,885	\$ 28,885
2122	\$ -	\$ 4,507,771	\$ 4,507,771	\$ -	\$ -	\$ 29,751	\$ 29,751
2123	\$ -	\$ 4,643,004	\$ 4,643,004	\$ -	\$ -	\$ 30,644	\$ 30,644

* Equal to total contributions (14.58% of payroll for new employees) net of normal cost and expenses (13.92% of payroll for members hired after June 30, 2023), not less than 0.00%.



Single Discount Rate Development

Projection of Plan Fiduciary Net Position (Dollars in Thousands)

Fiscal Year Ending	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2024	\$ 1,067,200	\$ 40,015	\$ 35,797	\$ 452	\$ 74,834	\$ 1,145,800
2025	\$ 1,145,800	\$ 32,260	\$ 39,319	\$ 417	\$ 79,949	\$ 1,218,273
2026	\$ 1,218,273	\$ 30,444	\$ 43,245	\$ 392	\$ 84,825	\$ 1,289,905
2027	\$ 1,289,905	\$ 28,983	\$ 47,018	\$ 371	\$ 89,660	\$ 1,361,159
2028	\$ 1,361,159	\$ 27,663	\$ 51,069	\$ 352	\$ 94,464	\$ 1,431,865
2029	\$ 1,431,865	\$ 26,456	\$ 55,853	\$ 335	\$ 99,208	\$ 1,501,341
2030	\$ 1,501,341	\$ 25,331	\$ 60,626	\$ 319	\$ 103,868	\$ 1,569,595
2031	\$ 1,569,595	\$ 24,262	\$ 65,704	\$ 304	\$ 108,435	\$ 1,636,284
2032	\$ 1,636,284	\$ 23,237	\$ 70,776	\$ 289	\$ 112,894	\$ 1,701,350
2033	\$ 1,701,350	\$ 22,262	\$ 76,487	\$ 275	\$ 117,219	\$ 1,764,069
2034	\$ 1,764,069	\$ 21,325	\$ 82,195	\$ 261	\$ 121,382	\$ 1,824,320
2035	\$ 1,824,320	\$ 20,410	\$ 87,843	\$ 248	\$ 125,374	\$ 1,882,013
2036	\$ 1,882,013	\$ 19,523	\$ 93,713	\$ 235	\$ 129,180	\$ 1,936,768
2037	\$ 1,936,768	\$ 18,662	\$ 99,808	\$ 222	\$ 132,774	\$ 1,988,174
2038	\$ 1,988,174	\$ 17,836	\$ 105,807	\$ 210	\$ 136,138	\$ 2,036,131
2039	\$ 2,036,131	\$ 17,035	\$ 111,888	\$ 198	\$ 139,259	\$ 2,080,339
2040	\$ 2,080,339	\$ 16,247	\$ 117,976	\$ 186	\$ 142,117	\$ 2,120,541
2041	\$ 2,120,541	\$ 15,470	\$ 123,982	\$ 174	\$ 144,699	\$ 2,156,554
2042	\$ 2,156,554	\$ 14,706	\$ 129,750	\$ 163	\$ 146,995	\$ 2,188,342
2043	\$ 2,188,342	\$ 13,965	\$ 135,152	\$ 151	\$ 149,009	\$ 2,216,013
2044	\$ 2,216,013	\$ 13,237	\$ 140,689	\$ 140	\$ 150,731	\$ 2,239,152
2045	\$ 2,239,152	\$ 12,517	\$ 146,384	\$ 129	\$ 152,131	\$ 2,257,287
2046	\$ 2,257,287	\$ 11,816	\$ 151,940	\$ 118	\$ 153,185	\$ 2,270,230
2047	\$ 2,270,230	\$ 11,132	\$ 157,502	\$ 108	\$ 153,876	\$ 2,277,628
2048	\$ 2,277,628	\$ 10,475	\$ 162,748	\$ 97	\$ 154,192	\$ 2,279,450
2049	\$ 2,279,450	\$ 9,853	\$ 167,609	\$ 88	\$ 154,131	\$ 2,275,737
2050	\$ 2,275,737	\$ 9,265	\$ 172,165	\$ 78	\$ 153,694	\$ 2,266,453
2051	\$ 2,266,453	\$ 8,715	\$ 176,344	\$ 69	\$ 152,882	\$ 2,251,637
2052	\$ 2,251,637	\$ 8,196	\$ 180,165	\$ 61	\$ 151,696	\$ 2,231,303
2053	\$ 2,231,303	\$ 7,723	\$ 183,504	\$ 53	\$ 150,142	\$ 2,205,611
2054	\$ 2,205,611	\$ 7,292	\$ 186,391	\$ 45	\$ 148,229	\$ 2,174,696
2055	\$ 2,174,696	\$ 6,901	\$ 188,891	\$ 38	\$ 145,966	\$ 2,138,634
2056	\$ 2,138,634	\$ 6,562	\$ 190,792	\$ 32	\$ 143,365	\$ 2,097,737
2057	\$ 2,097,737	\$ 6,274	\$ 192,028	\$ 26	\$ 140,450	\$ 2,052,407
2058	\$ 2,052,407	\$ 6,043	\$ 192,570	\$ 21	\$ 137,250	\$ 2,003,109
2059	\$ 2,003,109	\$ 5,863	\$ 192,448	\$ 17	\$ 133,798	\$ 1,950,305
2060	\$ 1,950,305	\$ 5,734	\$ 191,664	\$ 13	\$ 130,124	\$ 1,894,486
2061	\$ 1,894,486	\$ 5,652	\$ 190,311	\$ 10	\$ 126,260	\$ 1,836,077
2062	\$ 1,836,077	\$ 5,609	\$ 188,488	\$ 8	\$ 122,233	\$ 1,775,423
2063	\$ 1,775,423	\$ 5,607	\$ 186,202	\$ 6	\$ 118,066	\$ 1,712,888
2064	\$ 1,712,888	\$ 5,644	\$ 183,466	\$ 4	\$ 113,784	\$ 1,648,846
2065	\$ 1,648,846	\$ 5,711	\$ 180,308	\$ 3	\$ 109,412	\$ 1,583,658
2066	\$ 1,583,658	\$ 5,808	\$ 176,749	\$ 2	\$ 104,975	\$ 1,517,690
2067	\$ 1,517,690	\$ 5,930	\$ 172,813	\$ 1	\$ 100,497	\$ 1,451,303
2068	\$ 1,451,303	\$ 6,075	\$ 168,530	\$ 1	\$ 96,002	\$ 1,384,849
2069	\$ 1,384,849	\$ 6,235	\$ 163,934	\$ -	\$ 91,514	\$ 1,318,664
2070	\$ 1,318,664	\$ 6,409	\$ 159,057	\$ -	\$ 87,055	\$ 1,253,071
2071	\$ 1,253,071	\$ 6,596	\$ 153,923	\$ -	\$ 82,646	\$ 1,188,390
2072	\$ 1,188,390	\$ 6,789	\$ 148,559	\$ -	\$ 78,310	\$ 1,124,930
2073	\$ 1,124,930	\$ 6,991	\$ 142,988	\$ -	\$ 74,066	\$ 1,062,999

For the purposes of this projection, we assumed the 14.58% statutory contribution rate would continue after the plan becomes fully funded.



Single Discount Rate Development

Projection of Plan Fiduciary Net Position (Dollars in Thousands)

(Concluded)

Fiscal Year Ending	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2074	\$ 1,062,999	\$ 7,200	\$ 137,232	\$ -	\$ 69,936	\$ 1,002,903
2075	\$ 1,002,903	\$ 7,416	\$ 131,311	\$ -	\$ 65,941	\$ 944,949
2076	\$ 944,949	\$ 7,638	\$ 125,249	\$ -	\$ 62,100	\$ 889,438
2077	\$ 889,438	\$ 7,867	\$ 119,071	\$ -	\$ 58,435	\$ 836,669
2078	\$ 836,669	\$ 8,103	\$ 112,799	\$ -	\$ 54,965	\$ 786,938
2079	\$ 786,938	\$ 8,347	\$ 106,459	\$ -	\$ 51,710	\$ 740,536
2080	\$ 740,536	\$ 8,597	\$ 100,077	\$ -	\$ 48,690	\$ 697,746
2081	\$ 697,746	\$ 8,855	\$ 93,678	\$ -	\$ 45,924	\$ 658,847
2082	\$ 658,847	\$ 9,120	\$ 87,291	\$ -	\$ 43,430	\$ 624,106
2083	\$ 624,106	\$ 9,394	\$ 80,944	\$ -	\$ 41,226	\$ 593,782
2084	\$ 593,782	\$ 9,676	\$ 74,669	\$ -	\$ 39,329	\$ 568,118
2085	\$ 568,118	\$ 9,966	\$ 68,495	\$ -	\$ 37,755	\$ 547,344
2086	\$ 547,344	\$ 10,265	\$ 62,458	\$ -	\$ 36,518	\$ 531,669
2087	\$ 531,669	\$ 10,573	\$ 56,590	\$ -	\$ 35,634	\$ 521,286
2088	\$ 521,286	\$ 10,890	\$ 50,924	\$ -	\$ 35,113	\$ 516,365
2089	\$ 516,365	\$ 11,217	\$ 45,491	\$ -	\$ 34,967	\$ 517,058
2090	\$ 517,058	\$ 11,554	\$ 40,322	\$ -	\$ 35,204	\$ 523,494
2091	\$ 523,494	\$ 11,900	\$ 35,442	\$ -	\$ 35,835	\$ 535,787
2092	\$ 535,787	\$ 12,257	\$ 30,876	\$ -	\$ 36,865	\$ 554,033
2093	\$ 554,033	\$ 12,625	\$ 26,643	\$ -	\$ 38,300	\$ 578,315
2094	\$ 578,315	\$ 13,004	\$ 22,759	\$ -	\$ 40,147	\$ 608,707
2095	\$ 608,707	\$ 13,394	\$ 19,234	\$ -	\$ 42,409	\$ 645,276
2096	\$ 645,276	\$ 13,796	\$ 16,073	\$ -	\$ 45,091	\$ 688,090
2097	\$ 688,090	\$ 14,209	\$ 13,271	\$ -	\$ 48,199	\$ 737,227
2098	\$ 737,227	\$ 14,636	\$ 10,821	\$ -	\$ 51,737	\$ 792,779
2099	\$ 792,779	\$ 15,075	\$ 8,706	\$ -	\$ 55,714	\$ 854,862
2100	\$ 854,862	\$ 15,527	\$ 6,907	\$ -	\$ 60,137	\$ 923,619
2101	\$ 923,619	\$ 15,993	\$ 5,399	\$ -	\$ 65,018	\$ 999,231
2102	\$ 999,231	\$ 16,473	\$ 4,154	\$ -	\$ 70,370	\$ 1,081,920
2103	\$ 1,081,920	\$ 16,967	\$ 3,144	\$ -	\$ 76,210	\$ 1,171,953
2104	\$ 1,171,953	\$ 17,476	\$ 2,338	\$ -	\$ 82,558	\$ 1,269,649
2105	\$ 1,269,649	\$ 18,000	\$ 1,707	\$ -	\$ 89,436	\$ 1,375,378
2106	\$ 1,375,378	\$ 18,540	\$ 1,222	\$ -	\$ 96,872	\$ 1,489,568
2107	\$ 1,489,568	\$ 19,096	\$ 858	\$ -	\$ 104,897	\$ 1,612,703
2108	\$ 1,612,703	\$ 19,669	\$ 590	\$ -	\$ 113,546	\$ 1,745,328
2109	\$ 1,745,328	\$ 20,259	\$ 397	\$ -	\$ 122,857	\$ 1,888,047
2110	\$ 1,888,047	\$ 20,867	\$ 262	\$ -	\$ 132,872	\$ 2,041,524
2111	\$ 2,041,524	\$ 21,493	\$ 169	\$ -	\$ 143,641	\$ 2,206,489
2112	\$ 2,206,489	\$ 22,138	\$ 106	\$ -	\$ 155,212	\$ 2,383,733
2113	\$ 2,383,733	\$ 22,802	\$ 66	\$ -	\$ 167,644	\$ 2,574,113
2114	\$ 2,574,113	\$ 23,486	\$ 40	\$ -	\$ 180,995	\$ 2,778,554
2115	\$ 2,778,554	\$ 24,191	\$ 24	\$ -	\$ 195,330	\$ 2,998,051
2116	\$ 2,998,051	\$ 24,916	\$ 14	\$ -	\$ 210,721	\$ 3,233,674
2117	\$ 3,233,674	\$ 25,664	\$ 8	\$ -	\$ 227,240	\$ 3,486,570
2118	\$ 3,486,570	\$ 26,434	\$ 5	\$ -	\$ 244,969	\$ 3,757,968
2119	\$ 3,757,968	\$ 27,227	\$ 3	\$ -	\$ 263,995	\$ 4,049,187
2120	\$ 4,049,187	\$ 28,043	\$ 1	\$ -	\$ 284,408	\$ 4,361,637
2121	\$ 4,361,637	\$ 28,885	\$ 1	\$ -	\$ 306,309	\$ 4,696,830
2122	\$ 4,696,830	\$ 29,751	\$ -	\$ -	\$ 329,802	\$ 5,056,383
2123	\$ 5,056,383	\$ 30,644	\$ -	\$ -	\$ 355,001	\$ 5,442,028

For the purposes of this projection, we assumed the 14.58% statutory contribution rate would continue after the plan becomes fully funded.



Single Discount Rate Development

Present Values of Projected Benefits (Dollars in Thousands)

Fiscal Year Ending	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{(a)-5}	(g)=(e)*vf ^{(a)-5}	(h)=(c)/(1+sdr) ^{(a)-5}
2024	\$ 1,067,200	\$ 35,797	\$ 35,797	\$ 0	\$ 34,606	\$ 0	\$ 34,606
2025	1,145,800	39,319	39,319	0	35,524	0	35,524
2026	1,218,273	43,245	43,245	0	36,515	0	36,515
2027	1,289,905	47,018	47,018	0	37,104	0	37,104
2028	1,361,159	51,069	51,069	0	37,664	0	37,664
2029	1,431,866	55,853	55,853	0	38,497	0	38,497
2030	1,501,341	60,626	60,626	0	39,054	0	39,054
2031	1,569,596	65,704	65,704	0	39,556	0	39,556
2032	1,636,286	70,776	70,776	0	39,822	0	39,822
2033	1,701,352	76,487	76,487	0	40,220	0	40,220
2034	1,764,071	82,195	82,195	0	40,394	0	40,394
2035	1,824,321	87,843	87,843	0	40,345	0	40,345
2036	1,882,015	93,713	93,713	0	40,226	0	40,226
2037	1,936,771	99,808	99,808	0	40,039	0	40,039
2038	1,988,178	105,807	105,807	0	39,669	0	39,669
2039	2,036,136	111,888	111,888	0	39,204	0	39,204
2040	2,080,345	117,976	117,976	0	38,633	0	38,633
2041	2,120,547	123,982	123,982	0	37,944	0	37,944
2042	2,156,560	129,750	129,750	0	37,111	0	37,111
2043	2,188,349	135,152	135,152	0	36,128	0	36,128
2044	2,216,020	140,689	140,689	0	35,147	0	35,147
2045	2,239,159	146,384	146,384	0	34,178	0	34,178
2046	2,257,293	151,940	151,940	0	33,154	0	33,154
2047	2,270,236	157,502	157,502	0	32,119	0	32,119
2048	2,277,634	162,748	162,748	0	31,018	0	31,018
2049	2,279,456	167,609	167,609	0	29,855	0	29,855
2050	2,275,744	172,165	172,165	0	28,660	0	28,660
2051	2,266,461	176,344	176,344	0	27,435	0	27,435
2052	2,251,645	180,165	180,165	0	26,196	0	26,196
2053	2,231,312	183,504	183,504	0	24,936	0	24,936
2054	2,205,619	186,391	186,391	0	23,671	0	23,671
2055	2,174,704	188,891	188,891	0	22,419	0	22,419
2056	2,138,643	190,792	190,792	0	21,164	0	21,164
2057	2,097,745	192,028	192,028	0	19,907	0	19,907
2058	2,052,414	192,570	192,570	0	18,657	0	18,657
2059	2,003,116	192,448	192,448	0	17,426	0	17,426
2060	1,950,312	191,664	191,664	0	16,219	0	16,219
2061	1,894,492	190,311	190,311	0	15,051	0	15,051
2062	1,836,083	188,488	188,488	0	13,932	0	13,932
2063	1,775,430	186,202	186,202	0	12,862	0	12,862
2064	1,712,896	183,466	183,466	0	11,844	0	11,844
2065	1,648,853	180,308	180,308	0	10,879	0	10,879
2066	1,583,665	176,749	176,749	0	9,967	0	9,967
2067	1,517,697	172,813	172,813	0	9,107	0	9,107
2068	1,451,310	168,530	168,530	0	8,300	0	8,300
2069	1,384,856	163,934	163,934	0	7,546	0	7,546
2070	1,318,671	159,057	159,057	0	6,842	0	6,842
2071	1,253,078	153,923	153,923	0	6,188	0	6,188
2072	1,188,395	148,559	148,559	0	5,582	0	5,582
2073	1,124,935	142,988	142,988	0	5,021	0	5,021



Single Discount Rate Development

Present Values of Projected Benefits (Dollars in Thousands)

(Concluded)

Fiscal Year Ending	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^(a)-.5	(g)=(e)*vf^(a)-.5	(h)=(c)/(1+sdr)^(a)-.5
2074	\$ 1,063,004	\$ 137,232	\$ 137,232	\$ 0	\$ 4,504	\$ 0	\$ 4,504
2075	1,002,908	131,311	131,311	0	4,028	0	4,028
2076	944,954	125,249	125,249	0	3,590	0	3,590
2077	889,443	119,071	119,071	0	3,190	0	3,190
2078	836,674	112,799	112,799	0	2,824	0	2,824
2079	786,943	106,459	106,459	0	2,491	0	2,491
2080	740,541	100,077	100,077	0	2,189	0	2,189
2081	697,751	93,678	93,678	0	1,915	0	1,915
2082	658,851	87,291	87,291	0	1,667	0	1,667
2083	624,110	80,944	80,944	0	1,445	0	1,445
2084	593,786	74,669	74,669	0	1,246	0	1,246
2085	568,122	68,495	68,495	0	1,068	0	1,068
2086	547,347	62,458	62,458	0	910	0	910
2087	531,673	56,590	56,590	0	771	0	771
2088	521,290	50,924	50,924	0	648	0	648
2089	516,369	45,491	45,491	0	541	0	541
2090	517,062	40,322	40,322	0	448	0	448
2091	523,498	35,442	35,442	0	368	0	368
2092	535,791	30,876	30,876	0	300	0	300
2093	554,037	26,643	26,643	0	242	0	242
2094	578,319	22,759	22,759	0	193	0	193
2095	608,710	19,234	19,234	0	152	0	152
2096	645,278	16,073	16,073	0	119	0	119
2097	688,092	13,271	13,271	0	92	0	92
2098	737,229	10,821	10,821	0	70	0	70
2099	792,782	8,706	8,706	0	53	0	53
2100	854,864	6,907	6,907	0	39	0	39
2101	923,621	5,399	5,399	0	29	0	29
2102	999,233	4,154	4,154	0	21	0	21
2103	1,081,921	3,144	3,144	0	15	0	15
2104	1,171,954	2,338	2,338	0	10	0	10
2105	1,269,650	1,707	1,707	0	7	0	7
2106	1,375,379	1,222	1,222	0	5	0	5
2107	1,489,569	858	858	0	3	0	3
2108	1,612,705	590	590	0	2	0	2
2109	1,745,330	397	397	0	1	0	1
2110	1,888,048	262	262	0	1	0	1
2111	2,041,526	169	169	0	0	0	0
2112	2,206,491	106	106	0	0	0	0
2113	2,383,735	66	66	0	0	0	0
2114	2,574,115	40	40	0	0	0	0
2115	2,778,556	24	24	0	0	0	0
2116	2,998,053	14	14	0	0	0	0
2117	3,233,676	8	8	0	0	0	0
2118	3,486,572	5	5	0	0	0	0
2119	3,757,970	3	3	0	0	0	0
2120	4,049,189	1	1	0	0	0	0
2121	4,361,639	1	1	0	0	0	0
2122	4,696,832	0	0	0	0	0	0
2123	5,056,384	0	0	0	0	0	0
Totals					\$ 1,368,737	\$ 0	\$ 1,368,737



SECTION H

GLOSSARY OF TERMS

Glossary of Terms

<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as “accrued liability” or “actuarial liability.”
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future benefit payments at predetermined rates of interest to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the Actuarially Determined Contribution has a normal cost payment and an amortization payment.



Glossary of Terms

<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered-Employee Payroll</i>	The payroll of covered employees, which is typically only the pensionable pay (meets the statutory salary definition) and does not include pay above any pay cap.
<i>Deferred Inflows and Outflows of Resources</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>Discount Rate or Single Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none">1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.
<i>Entry Age Actuarial Cost Method or Entry Age Normal (EAN)</i>	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Glossary of Terms

<i>GASB</i>	The Governmental Accounting Standards Board is an organization that exists with authority to promulgate accounting standards for state and local governmental entities.
<i>Fiduciary Net Position</i>	The fiduciary net position is the value of the assets of the trust.
<i>Long-Term Expected Rate of Return</i>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<i>Money-Weighted Rate of Return</i>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<i>Multiple-Employer Defined Benefit Pension Plan</i>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<i>Municipal Bond Rate</i>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<i>Net Pension Liability (NPL)</i>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<i>Non-Employer Contribution Entities</i>	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting Statements No. 67 and No. 68 plan members are not considered non-employer contribution entities.
<i>Normal Cost</i>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
<i>Other Postemployment Benefits (OPEB)</i>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
<i>Real Rate of Return</i>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<i>Service Cost</i>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

Glossary of Terms

Total Pension Expense

The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

1. Service Cost
2. Interest on the Total Pension Liability
3. Current-Period Changes in Benefit Terms
4. Employee Contributions
5. Projected Earnings on Plan Investments
6. Pension Plan Administrative Expense
7. Other Changes in Plan Fiduciary Net Position
8. Recognition of Outflow (Inflow) of Resources due to the difference between expected and actual measurement of the Total Pension Liability
9. Recognition of Outflow (Inflow) of Resources due to Assumption Changes
10. Recognition of Outflow (Inflow) of Resources due to the difference between projected and actual earnings in pension plan investments

Total Pension Liability (TPL)

The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued Liability (UAAL)

The UAAL is the difference between actuarial accrued liability and valuation assets.

Valuation Assets

The valuation assets are the plan fiduciary net position used in determining the net pension liability of the plan. For purposes of the GASB Statement No. 67, the asset valuation method is equal to the market value of assets.