

Wyoming Judicial Retirement System

GASB Statement Nos. 67 and 68 Accounting and Financial
Reporting for Pensions

For Measurement Date as of December 31, 2022





March 25, 2023

Board of Trustees
Wyoming Judicial Retirement System

Dear Board Members:

This report provides information required by the Wyoming Judicial Retirement System (WRS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 and 68 for the Wyoming Retirement System ("WRS"). These calculations have been made on a basis that is consistent with our understanding of these Statements.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone 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.

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 Statement No. 67 and GASB Statement 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 obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the Wyoming Judicial Retirement System ("WRS") only in its entirety and only with the permission of WRS. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by WRS, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by WRS.

This report complements the actuarial valuation report that was provided to WRS and should be considered in conjunction with that report. Please see the actuarial valuation report as of January 1, 2022 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. Furthermore, this report again includes the assumptions adopted by the Board at the November 17, 2021 and the February 17, 2022 meetings. For a detailed description of the experience related to these assumptions, as well as the rationale for any changes, please see our latest Wyoming Retirement System Actuarial Experience Study Report that covered the five-year investigation period ending December 31, 2020.

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.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Wyoming Judicial Retirement System as of the valuation 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.

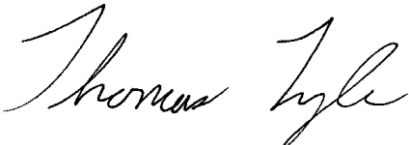
Paul T. Wood, Thomas A. Lyle, and Dana Woolfrey are members of the American Academy of Actuaries (MAAA) and are experienced in performing valuations for public retirement systems. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

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SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2022

	2022
Actuarial Valuation Date	January 1, 2022
Measurement Date of the Net Pension Liability	December 31, 2022
Employer's Fiscal Year Ending Date (Reporting Date)	December 31, 2022

Membership

Number of	
- Retirees and Beneficiaries	32
- Inactive, Nonretired Members	1
- Active Members	53
- Total	86
Covered Payroll	\$ 8,194,423

Net Pension Liability

Total Pension Liability	\$ 44,459,652
Plan Fiduciary Net Position	40,373,252
Net Pension Liability	\$ 4,086,400
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	90.81 %
Net Pension Liability as a Percentage of Covered Payroll	49.87 %

Development of the Single Discount Rate

Single Discount Rate	6.34 %
Long-Term Expected Rate of Investment Return	6.80 %
Long-Term Municipal Bond Rate*	4.05 %
Last year ending December 31 in the 2022 to 2121 projection period for which projected benefit payments are fully funded	2057

Total Pension Expense \$ 2,117,037

Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 738,300	\$ 773,367
Changes in assumptions	3,021,714	0
Net difference between projected and actual earnings on pension plan investments	4,747,154	3,448,184
Total	\$ 8,507,168	\$ 4,221,551

**Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 31, 2022. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax exempt securities.*



Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 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 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.

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 or local governments 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 34 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 WRS subsequent to the measurement date of December 31, 2022.

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 of 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.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans to include certain additional information. The list of disclosure items should include:

- a description of benefits provided by the plan;
- the type 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 and the net pension liability;
- the net pension liability using a discount rate that is 1% higher and 1% lower than 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;
- 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
- a comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

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 all actuarial assumptions are met (including the assumption of the plan earning 6.80% on the actuarial value of assets), then the following outcomes are expected:

1. The employer normal cost as a percentage of pay is expected to remain level as a percentage of payroll.
2. The unfunded liability is expected to increase in the future.
3. The funded status of the plan is expected to be gradually decline in the future.

This funding policy results in the expectation that the plan's assets will not be able to fully pay for the promised benefit payments through at least 2121 and, therefore, results in an expected crossover date in 2057 and a GASB single discount rate of 6.34%. 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.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. 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 January 1, 2022 and a measurement date of December 31, 2022.

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 (which is published by the Federal Reserve) 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 expected rate of return on pension plan investments is 6.80%; the municipal bond rate is 4.05% (based on the daily rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting Single Discount Rate is 6.34%.

Effective Date and Transition

GASB Statement Nos. 67 and 68 are effective for fiscal years beginning after June 15, 2013, and June 15, 2014 respectively, earlier application is encouraged by the GASB.

SECTION B

FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Wyoming Judicial Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Statement of Pension Expense under GASB Statement No. 68

Fiscal Year Ended December 31, 2022

A. Expense

1. Service Cost	\$	2,110,197
2. Interest on the Total Pension Liability		2,717,927
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(757,596)
5. Projected Earnings on Plan Investments (made negative for addition here)		(2,962,992)
6. Pension Plan Administrative Expense		37,872
7. Other Changes in Plan Fiduciary Net Position		2,539
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		826,286
9. Recognition of Outflow (Inflow) of Resources due to Assets		142,804
10. Total Pension Expense	\$	2,117,037 *

* In accordance with GASB 71, employers may need to illustrate contributions made after the measurement date.

Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended December 31, 2022

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$	(658,488)
2. Assumption Changes (gains) or losses	\$	1,899,013
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		5.8576
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	\$	(112,416)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for assumption changes	\$	324,196
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$	211,780
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	\$	(546,072)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for assumption changes	\$	1,574,817
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$	1,028,745

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$	5,933,942
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	\$	1,186,788
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$	4,747,154

History of Deferred Outflows and Inflows of Resources by Source

Fiscal Year Ended December 31, 2022

Differences between expected and actual experience - Net (inflows)/outflows of resources

Recognition Period	7.9046	7.7907	7.3715	6.7663	6.7746	6.6532	6.8706	6.3142	5.8576		
	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Deferred Net (Inflows)/Outflows at Measurement
Total	\$ -	\$ (372,108)	\$ (229,282)	\$ (620,955)	\$ 183,937	\$ (112,158)	\$ 1,225,009	\$ (147,370)	\$ (658,488)		
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	(47,763)	-	-	-	-	-	-	-	(47,763)	(47,763)
2016	-	(47,763)	(31,104)	-	-	-	-	-	-	(78,867)	(78,867)
2017	-	(47,763)	(31,104)	(91,772)	-	-	-	-	-	(170,639)	(170,639)
2018	-	(47,763)	(31,104)	(91,772)	27,151	-	-	-	-	(143,488)	(143,488)
2019	-	(47,763)	(31,104)	(91,772)	27,151	(16,858)	-	-	-	(160,346)	(160,346)
2020	-	(47,763)	(31,104)	(91,772)	27,151	(16,858)	178,297	-	-	17,951	17,951
2021	-	(47,763)	(31,104)	(91,772)	27,151	(16,858)	178,297	(23,339)	-	(5,388)	(5,388)
2022	-	(37,767)	(31,104)	(91,772)	27,151	(16,858)	178,297	(23,339)	(112,416)	(107,808)	(107,808)
2023	-	-	(11,554)	(70,323)	27,151	(16,858)	178,297	(23,339)	(112,416)	(29,042)	\$ (35,067)
2024	-	-	-	-	21,031	(16,858)	178,297	(23,339)	(112,416)	46,715	46,715
2025	-	-	-	-	-	(11,010)	178,297	(23,339)	(112,416)	31,532	31,532
2026	-	-	-	-	-	-	155,227	(23,339)	(112,416)	19,472	19,472
2027	-	-	-	-	-	-	-	(7,336)	(96,408)	(103,744)	(103,744)
Thereafter	-	-	-	-	-	-	-	-	-	-	-
	\$ -	\$ (372,108)	\$ (229,282)	\$ (620,955)	\$ 183,937	\$ (112,158)	\$ 1,225,009	\$ (147,370)	\$ (658,488)	\$ (731,415)	

Assumption changes - Net (inflows)/outflows of resources

Recognition Period	7.9046	7.7907	7.3715	6.7663	6.7746	6.6532	6.8706	6.3142	5.8576		
	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	
Total	\$ -	\$ -	\$ -	\$ 2,258,668	\$ -	\$ -	\$ -	\$ 1,743,269	\$ 1,899,013		
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	333,811	-	-	-	-	-	333,811	333,811
2018	-	-	-	333,811	-	-	-	-	-	333,811	333,811
2019	-	-	-	333,811	-	-	-	-	-	333,811	333,811
2020	-	-	-	333,811	-	-	-	-	-	333,811	333,811
2021	-	-	-	333,811	-	-	-	276,087	-	609,898	609,898
2022	-	-	-	333,811	-	-	-	276,087	324,196	934,094	934,094
2023	-	-	-	255,802	-	-	-	276,087	324,196	856,085	\$ 3,021,714
2024	-	-	-	-	-	-	-	276,087	324,196	600,283	600,283
2025	-	-	-	-	-	-	-	276,087	324,196	600,283	600,283
2026	-	-	-	-	-	-	-	276,087	324,196	600,283	600,283
2027	-	-	-	-	-	-	-	86,747	278,033	364,780	364,780
Thereafter	-	-	-	-	-	-	-	-	-	-	-
	\$ -	\$ -	\$ -	\$ 2,258,668	\$ -	\$ -	\$ -	\$ 1,743,269	\$ 1,899,013	\$ 5,900,950	



History of Deferred Outflows and Inflows of Resources by Source Fiscal Year Ended December 31, 2022 (continued)

Net Difference between projected and actual earnings on pension plan investments - Net (inflows)/outflows of resources

Recognition Period	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000		Deferred Net (Inflows)/Outflows at Measurement
	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total		
Total	\$ 626,833	\$ 2,022,635	\$ 138,916	\$ (1,759,558)	\$ 3,092,625	\$ (3,228,107)	\$ (1,240,511)	\$ (3,843,928)	\$ 5,933,942			
2014	125,367									125,367		
2015	125,367	404,527								529,894		
2016	125,367	404,527	27,783							557,677		
2017	125,367	404,527	27,783	(351,912)						205,765		
2018	125,365	404,527	27,783	(351,912)	618,525					824,288		
2019	-	404,527	27,783	(351,912)	618,525	(645,621)				53,302		
2020	-	-	27,784	(351,912)	618,525	(645,621)	(248,102)			(599,326)		
2021	-	-	-	(351,910)	618,525	(645,621)	(248,102)	(768,786)		(1,395,894)		
2022	-	-	-	-	618,525	(645,621)	(248,102)	(768,786)	1,186,788	142,804		
2023	-	-	-	-	-	(645,623)	(248,102)	(768,786)	1,186,788	(475,723)		\$ 1,298,970
2024	-	-	-	-	-	-	(248,103)	(768,786)	1,186,788	169,899		
2025	-	-	-	-	-	-	-	(768,784)	1,186,788	418,004		
2026	-	-	-	-	-	-	-	-	1,186,790	1,186,790		
2027	-	-	-	-	-	-	-	-	-	-		
Thereafter	-	-	-	-	-	-	-	-	-	-		
	\$ 626,833	\$ 2,022,635	\$ 138,916	\$ (1,759,558)	\$ 3,092,625	\$ (3,228,107)	\$ (1,240,511)	\$ (3,843,928)	\$ 5,933,942	\$ 1,742,847		

Total net differences from all sources - Net (inflows)/outflows of resources

	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total		
Total	\$ 626,833	\$ 1,650,527	\$ (90,366)	\$ (121,845)	\$ 3,276,562	\$ (3,340,265)	\$ (15,502)	\$ (2,248,029)	\$ 7,174,467			
2014	125,367									125,367		
2015	125,367	356,764								482,131		
2016	125,367	356,764	(3,321)							478,810		
2017	125,367	356,764	(3,321)	(109,873)						368,937		
2018	125,365	356,764	(3,321)	(109,873)	645,676					1,014,611		
2019	-	356,764	(3,321)	(109,873)	645,676	(662,479)				226,767		
2020	-	(47,763)	(3,320)	(109,873)	645,676	(662,479)	(69,805)			(247,564)		
2021	-	(47,763)	(31,104)	(109,871)	645,676	(662,479)	(69,805)	(516,038)		(791,384)		
2022	-	(37,767)	(31,104)	242,039	645,676	(662,479)	(69,805)	(516,038)	1,398,568	969,090		
2023	-	-	(11,554)	185,479	27,151	(662,481)	(69,805)	(516,038)	1,398,568	351,320		\$ 4,285,617
2024	-	-	-	-	21,031	(16,858)	(69,806)	(516,038)	1,398,568	816,897		
2025	-	-	-	-	-	(11,010)	178,297	(516,036)	1,398,568	1,049,819		
2026	-	-	-	-	-	-	155,227	252,748	1,398,570	1,806,545		
2027	-	-	-	-	-	-	-	79,411	181,625	261,036		
Thereafter	-	-	-	-	-	-	-	-	-	-		
	\$ 626,833	\$ 1,650,527	\$ (90,366)	\$ (121,845)	\$ 3,276,562	\$ (3,340,265)	\$ (15,502)	\$ (2,248,029)	\$ 7,174,467	\$ 6,912,382		



Statement of Outflows and Inflows

Arising from Current and Prior Reporting Periods

Fiscal Year Ended December 31, 2022

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	\$ 1,139,542	\$ 313,256	\$ 826,286
2. Due to Assets	1,805,313	1,662,509	142,804
3. Total	\$ 2,944,855	\$ 1,975,765	\$ 969,090

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	\$ 205,448	\$ 313,256	\$ (107,808)
2. Assumption Changes	934,094	0	934,094
3. Net Difference between projected and actual earnings on pension plan investments	1,805,313	1,662,509	142,804
4. Total	\$ 2,944,855	\$ 1,975,765	\$ 969,090

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	\$ 738,300	\$ 773,367	\$ (35,067)
2. Assumption Changes	3,021,714	0	3,021,714
3. Net Difference between projected and actual earnings on pension plan investments	4,747,154	3,448,184	1,298,970
4. Total	\$ 8,507,168	\$ 4,221,551	\$ 4,285,617

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

Year Ending December 31	Net Deferred Outflows of Resources
2023	\$ 351,320
2024	816,897
2025	1,049,819
2026	1,806,545
2027	261,036
Thereafter	0
Total	\$ 4,285,617



Statement of Fiduciary Net Position as of December 31, 2022

	2022
Assets	
Cash and Deposits	\$ 2,246,868
Receivables	
Accounts Receivable - Sale of Investments	\$ 17,519
Accrued Interest and Other Dividends	74,069
Contributions	0
Accounts Receivable - Other	2,433,064
Total Receivables	\$ 2,524,652
Investments	
Fixed Income	\$ 6,512,177
Equities	19,141,054
Private Markets	5,232,571
Marketable Alternatives	7,322,458
Security Lending Collateral	1,902,394
Capital Assets, at Cost, Net of Accumulated Depreciation	7,234
Total Investments	\$ 40,117,888
Total Assets	\$ 44,889,408
Liabilities	
Payables	
Accounts Payable - Purchase of Investments	\$ 4,457,918
Accrued Expenses	58,238
Accounts Payable - Other	0
Total Liabilities	\$ 4,516,156
Net Position Restricted for Pensions	\$ 40,373,252

Statement of Changes in Fiduciary Net Position for Year Ended December 31, 2022

	2022
Additions	
Contributions	
Employer	\$ 1,191,444
Employee	757,596
Other - Employer	59
Other - Employee	0
Total Contributions	\$ 1,949,099
Investment Income	
Net Appreciation in Fair Value of Investments	\$ (3,501,210)
Interest and Dividends	789,181
Less Investment Expense	(258,921)
Net Investment Income	\$ (2,970,950)
Other	\$ 0
Total Additions	\$ (1,021,851)
 Deductions	
Benefit Payments, including Refunds of Employee Contributions	\$ 2,359,700
Pension Plan Administrative Expense	37,872
Other	2,539
Total Deductions	\$ 2,400,111
Net Increase in Net Position	\$ (3,421,962)
 Net Position Restricted for Pensions	
Beginning of Year	\$ 43,795,214
End of Year	\$ 40,373,252

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Wyoming Judicial Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Schedule of Changes in Net Pension Liability and Related Ratios

Current Reporting Period

Fiscal Year Ended December 31, 2022

A. Total pension liability	
1. Service cost	\$ 2,110,197
2. Interest on the total pension liability	2,717,927
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the total pension liability	(658,488)
5. Changes of assumptions	1,899,013
6. Benefit payments, including refunds of employee contributions	(2,359,700)
7. Net change in total pension liability	<u>3,708,949</u>
8. Total pension liability – beginning	<u>40,750,703</u>
9. Total pension liability – ending	<u><u>\$ 44,459,652</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 1,191,503
2. Contributions – employee	757,596
3. Net investment income	(2,970,950)
4. Benefit payments, including refunds of employee contributions	(2,359,700)
5. Pension plan administrative expense	(37,872)
6. Other	(2,539)
7. Net change in plan fiduciary net position	<u>(3,421,962)</u>
8. Plan fiduciary net position – beginning	<u>43,795,214</u>
9. Plan fiduciary net position – ending	<u><u>\$ 40,373,252</u></u>
C. Net pension liability	<u><u>\$ 4,086,400</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	90.81 %
E. Covered-employee payroll	\$ 8,194,423
F. Net pension liability as a percentage of covered-employee payroll	49.87 %

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Fiscal year ending December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability									
Service cost	\$ 2,110,197	\$ 2,006,844	\$ 1,713,172	\$ 1,529,896	\$ 1,509,964	\$ 1,470,668	\$ 1,263,270	\$ 1,263,278	\$ 1,186,595
Interest on the total pension liability	2,717,927	2,592,567	2,393,270	2,168,200	2,037,989	1,880,909	1,793,779	1,659,184	1,539,910
Changes of benefit terms	0	0	0	0	0	0	0	0	0
Difference between expected and actual experience	(658,488)	(147,370)	1,225,009	(112,158)	183,937	(620,955)	(229,282)	(372,108)	0
Changes of assumptions	1,899,013	1,743,269	0	0	0	2,258,668	0	0	0
Benefit payments, including refunds of employee contributions	(2,359,700)	(1,943,586)	(1,878,084)	(1,720,417)	(1,454,953)	(1,166,423)	(981,321)	(931,621)	(775,805)
Net change in total pension liability	3,708,949	4,251,724	3,453,367	1,865,521	2,276,937	3,822,867	1,846,446	1,618,733	1,950,700
Total pension liability - beginning	40,750,703	36,498,979	33,045,612	31,180,091	28,903,154	25,080,287	23,233,841	21,615,108	19,664,408
Total pension liability - ending (a)	\$ 44,459,652	\$ 40,750,703	\$ 36,498,979	\$ 33,045,612	\$ 31,180,091	\$ 28,903,154	\$ 25,080,287	\$ 23,233,841	\$ 21,615,108
Plan fiduciary net position									
Employer contributions	\$ 1,191,503	\$ 1,171,758	\$ 1,135,182	\$ 1,060,477	\$ 960,478	\$ 949,300	\$ 925,971	\$ 920,867	\$ 916,598
Employee contributions	757,596	745,064	721,821	1,028,339	610,818	603,602	588,791	585,545	582,831
Pension plan net investment income	(2,970,950)	6,389,711	3,612,442	5,224,148	(1,038,644)	3,549,526	1,679,033	(228,304)	1,038,134
Benefit payments, including refunds of employee contributions	(2,359,700)	(1,943,586)	(1,878,084)	(1,720,417)	(1,454,953)	(1,166,423)	(981,321)	(931,621)	(775,805)
Pension plan administrative expense	(37,872)	(35,804)	(32,231)	(27,764)	(28,405)	(25,315)	(22,090)	(17,833)	(17,117)
Other	(2,539)	(1,347)	(1,283)	(1,284)	(1,146)	(2,313)	(1,128)	(1,072)	(244)
Net change in plan fiduciary net position	(3,421,962)	6,325,796	3,557,847	5,563,499	(951,852)	3,908,377	2,189,256	327,582	1,744,397
Plan fiduciary net position - beginning	43,795,214	37,469,418	33,911,571	28,348,072	29,299,924	25,391,547	23,202,291	22,874,709	21,130,312
Plan fiduciary net position - ending (b)	\$ 40,373,252	\$ 43,795,214	\$ 37,469,418	\$ 33,911,571	\$ 28,348,072	\$ 29,299,924	\$ 25,391,547	\$ 23,202,291	\$ 22,874,709
Net pension liability - ending (a) - (b)	\$ 4,086,400	\$ (3,044,511)	\$ (970,439)	\$ (865,959)	\$ 2,832,019	\$ (396,770)	\$ (311,260)	\$ 31,550	\$ (1,259,601)
Plan fiduciary net position as a percentage of total pension liability	90.81 %	107.47 %	102.66 %	102.62 %	90.92 %	101.37 %	101.24 %	99.86 %	105.83 %
Covered-employee payroll	\$ 8,194,423	\$ 7,886,295	\$ 7,410,536	\$ 6,602,303	\$ 6,558,029	\$ 6,386,001	\$ 6,384,628	\$ 6,363,028	\$ 5,989,181
Projected Valuation Payroll	\$ 8,501,713	\$ 8,182,031	\$ 7,706,958	\$ 6,866,395	\$ 6,820,351	\$ 6,641,441	\$ 6,624,052	\$ 6,601,641	\$ 6,213,775
Net pension liability as a percentage of covered-employee payroll	49.87 %	(38.61)%	(13.10)%	(13.12)%	43.18 %	(6.21)%	(4.88)%	0.50 %	(21.03)%

Notes to Schedule:

For 2022, 2021, 2020, 2019, 2018, 2017, 2016 and 2015, "Other" changes to Plan Fiduciary Net Position includes other funding sources and depreciation expenses.

For 2014, "Other" changes also may include member redeposits and member service purchase contributions.



Schedules of Required Supplementary Information

Schedule of Net Pension Liability Multiyear

FY Ending December 31,	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	\$ 21,615,108	\$ 22,874,709	\$ (1,259,601)	105.83 %	\$ 5,989,181	(21.03)%
2015	23,233,841	23,202,291	31,550	99.86 %	6,363,028	0.50 %
2016	25,080,287	25,391,547	(311,260)	101.24 %	6,384,628	(4.88)%
2017	28,903,154	29,299,924	(396,770)	101.37 %	6,386,001	(6.21)%
2018	31,180,091	28,348,072	2,832,019	90.92 %	6,558,029	43.18 %
2019	33,045,612	33,911,571	(865,959)	102.62 %	6,602,303	(13.12)%
2020	36,498,979	37,469,418	(970,439)	102.66 %	7,410,536	(13.10)%
2021	40,750,703	43,795,214	(3,044,511)	107.47 %	7,886,295	(38.61)%
2022	44,459,652	40,373,252	4,086,400	90.81 %	8,194,423	49.87 %

* Covered payroll is the amount in force as of the valuation date and likely differs from the actual payroll paid during the year.

Schedule of Contributions Multiyear Last 10 Fiscal Years

FY Ending December 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll*	Actual Contribution as a % of Covered Payroll
2014	\$ 596,723	\$ 916,598	\$ (319,875)	\$ 5,989,181	15.30 %
2015	589,177	920,867	(331,690)	6,363,028	14.47 %
2016	579,926	925,971	(346,045)	6,384,628	14.50 %
2017	543,468	949,263	(405,795)	6,386,001	14.86 %
2018	909,557	960,478	(50,921)	6,558,029	14.65 %
2019	986,724	1,060,477	(73,753)	6,602,303	16.06 %
2020	1,176,110	1,135,182	40,928	7,410,536	15.32 %
2021	1,197,434	1,171,758	25,676	7,886,295	14.86 %
2022	1,440,301	1,191,503	248,798	8,194,423	14.54 %

* Covered payroll is the amount in force as of the valuation date and likely differs from the actual payroll paid during the year.

Notes to Schedule of Contributions

Valuation Date: January 1, 2022
Notes Actuarially determined contribution rates are calculated as of July 1 each year for implementation the following fiscal year.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	12 years
Asset Valuation Method	5-Year smoothed market
Inflation	2.25%
Salary Increases	3.75% per annum
Payroll Growth Rate	3.75%
Cost-of-Living Increase	0.00%
Investment Rate of Return	6.80%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2022 valuation pursuant to an experience study of the period 2016 - 2020.
Post-Retirement Mortality	Pub-2010 General Healthy Annuitant Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale Males: No set back with a multiplier of 100% Females: No set back with a multiplier of 103%
Pre-Retirement Mortality	Pub-2010 General Employee Mortality Table, amount-weighted, fully generational, projected with the MP-2020 Ultimate Scale Males: No set back with a multiplier of 100% Females: No set back with a multiplier of 100%

Other Information:

Notes There were no benefit changes during the year.
The employer is currently contributing at the rate of 14.50% of salary.
Employees are currently contributing at the rate of 9.22% of salary.
The roll-forward methodology employed for purposes of the GASB disclosures is based on generally accepted actuarial methods.

Schedule of Investment Returns Multiyear Last 10 Fiscal Years

<u>FY Ending December 31,</u>	<u>Annual Return¹</u>
2014	4.70 %
2015	(0.26)%
2016	7.60 %
2017	14.20 %
2018	(3.52)%
2019	18.72 %
2020	11.03 %
2021	17.19 %
2022	(6.99)%

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

SECTION D

NOTES TO FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Wyoming Judicial Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Single Discount Rate

A Single Discount Rate of 6.34% was used to measure the total pension liability. This Single Discount Rate was based on an expected rate of return on pension plan investments of 6.80% and a municipal bond rate of 4.05%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the statutory required contribution rate. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments through the year 2057. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2057, and the municipal bond rate was applied to all benefit payments after that date.

Sensitivity of Results

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 6.34%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

1% Decrease	Current Single Discount Rate Assumption	1% Increase
5.34%	6.34%	7.34%
\$ 8,673,175	\$ 4,086,400	\$ 141,855

Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	32
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	1
Active Plan Members	<u>53</u>
Total Plan Members	86

SECTION E

SUMMARY OF BENEFITS

Summary of Benefits

Covered Members	Any justice of the supreme court, district judge appointed or circuit court judge appointed to any of those offices on or after July 1, 1998, or who elects to participate in the judicial retirement program under this act in accordance with W.S. 9-3-713.
Final Average Salary	Employee's average annual salary for the highest paid three continuous years of service.
Form of Payment	Monthly benefit for life. Upon death, 50% of the benefit continues to be paid to the beneficiary.
Service Retirement	
Eligibility	Age 70 with continuous service from appointment, age 65 with four or more years of service, or age 60 with 20 or more years of service.
Monthly Benefit	Highest Average Salary times the sum of the following: <ul style="list-style-type: none">• 4% for each of the first five years of service,• 3% for each year from and including the sixth year through the fifteenth year of service,• 2% for each year from and including the sixteenth year through the twentieth year of service,• 1% for each year thereafter.
Vesting	Any employee who has left employment with four or more years of service, and who has not withdrawn accumulated contributions, is eligible to receive the above benefit or can elect to receive a lump-sum refund of contributions with interest. An employee who terminates with less than four years of service and has not served continuously from the date of appointment to the age of 70 is only eligible for the lump-sum benefit.
Early Retirement	A member who is at least age 55 with four or more years of service may retire with the benefits described above reduced five percent for each year of retirement prior to age 65.
Disability Retirement	
Eligibility	Retirement by reason of permanent disability after completion of at least 10 years of service.
Monthly Benefit	Service retirement benefit determined as of the disability retirement date.

Pre-Retirement Death

Eligibility No age or service requirements.

Benefit A lump sum equal to two times the employee contributions with interest. If the employee is vested, the beneficiary can elect, in lieu of this lump sum, to receive a monthly benefit equal to the actuarial equivalent of the retirement benefit that would be due the employee as if the member had terminated on the date of death.

Contributions

Employee 9.22% of salary.

Employer 14.50% of salary.

Interest 3.00% annually.

Cost-of-Living Improvements

W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change.

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the January 1, 2022 actuarial valuation for GASB reporting purposes and are based on assumptions adopted by the Board at the November 17, 2021 and the February 17, 2022 meetings.

1. Valuation Date

The valuation date for any given year is January 1st, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percent of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 6.34%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.

- d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 15 years from the valuation date. The Board's policy consists of amortizing the unfunded liability as of January 1, 2018, over a closed 15 year period with each subsequent amortization base created as a result of year to year experience changes over individual 15 year closed periods. The current year amortization base is determined by taking the current unfunded liability less the outstanding amounts of prior year bases.

3. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

4. Economic Assumptions

a. Investment return

6.80% per year, compounded annually, composed of an assumed 2.25% inflation rate and a 4.55% net real rate of return. This rate represents the assumed return, net of investment expenses. For the purpose of this valuation, the expected rate of return on pension plan investments is 6.80%, the municipal bond rate is 4.05%, and the resulting Single Discount Rate is 6.34%.

b. Salary increase rate

3.75% per annum

c. Payroll growth rate

In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.75% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

d. Cost-of-Living adjustment

No cost-of-living adjustment is assumed since the policy for providing the benefit requires Board approval to make the recommendation to the Joint Appropriations Committee and the funded level of the plan shows a cost-of-living requirement would not be permitted.

5. Demographic Assumptions

a. Mortality

Healthy Pre-Retirement Mortality:

Pub-2010 General Active Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Healthy Post-Retirement Mortality:

Pub-2010 General Healthy Annuitant Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 103%

Disabled Mortality

Pub-2010 General Disabled Retiree Mortality Table, amount weighted, fully generational, projected with the MP-2020 Ultimate Scale

Males: No set back with a multiplier of 100%

Females: No set back with a multiplier of 100%

Age	Pre-Retirement		Post-Retirement		Disabled	
	Projected to 2022 using the MP-2020 Ultimate Scale					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.35%	0.20%
25	0.02%	0.01%	0.02%	0.01%	0.24%	0.14%
30	0.03%	0.01%	0.03%	0.01%	0.30%	0.22%
35	0.04%	0.02%	0.04%	0.02%	0.39%	0.34%
40	0.06%	0.03%	0.06%	0.03%	0.55%	0.53%
45	0.08%	0.05%	0.09%	0.06%	0.86%	0.84%
50	0.13%	0.07%	0.25%	0.19%	1.36%	1.26%
55	0.19%	0.10%	0.37%	0.25%	1.80%	1.48%
60	0.27%	0.16%	0.52%	0.34%	2.13%	1.66%
65	0.40%	0.25%	0.78%	0.54%	2.60%	1.93%
70	0.61%	0.42%	1.31%	0.94%	3.36%	2.46%
75			2.32%	1.68%	4.51%	3.48%
80			4.18%	3.03%	6.43%	5.26%
85			7.74%	5.75%	9.74%	8.40%
90			13.60%	10.97%	15.07%	12.67%
95			21.81%	18.48%	22.51%	18.39%
100			31.45%	27.98%	31.45%	27.16%

b. Disability

Age	Disability	
	Male	Female
20	0.01%	0.01%
25	0.01%	0.01%
30	0.01%	0.01%
35	0.01%	0.01%
40	0.01%	0.01%
45	0.01%	0.01%
50	0.03%	0.03%
55	0.05%	0.05%
60	0.07%	0.07%

c. Withdrawal

No terminations are assumed to occur during the year.

d. Retirement Rates

Age	Retirement	
	Unreduced	Reduced
50-59	2.00%	2.00%
60	25.00%	15.00%
61-64	15.00%	10.00%
65	100.00%	15.00%
66		15.00%
67		100.00%

6. Other Assumptions

- a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit. It is assumed that 25% of active members who terminate with a deferred vested benefit will elect to have their contributions refunded.
- e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 65.
- f. No benefit amount data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.
- g. There will be no recoveries once disabled. We assume all members are totally disabled.
- h. No surviving spouse will remarry.
- i. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 2.50% to the valuation date.
- j. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.
- k. Decrement timing: Decrements of all types are assumed to occur mid-year.
- l. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
- m. Decrement relativity: Decrement rates are converted to probabilities in order to account for multiple decrements.
- n. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.
- o. Benefit Service: All members are assumed to accrue one year of service each year. Exact fractional service is used to determine the amount of benefit payable.

Experience Analysis

An experience study was conducted on behalf of all WRS' plans covering the five year period ending December 31, 2020. That study provided a detailed analysis concerning the development of the long term inflation rate, real rate of return and discount rate. The study also analyzed each major actuarial assumption (e.g. mortality, salary increases, retirement, termination and disability) and proposed assumptions consistent with the findings. For further information on the experience study and related assumption recommendation, the reader is directed to request the December 31, 2020 Wyoming Retirement System Experience Study.

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 assumed valuation discount rate 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 (which is published by the Federal Reserve) 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 expected rate of return on pension plan investments is 6.80%; the municipal bond rate is 4.05%; and the resulting Single Discount Rate is 6.34%.

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 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 (SDR). It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

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.

Single Discount Rate Development Projection of Contributions Ending December 31 for 2022 to 2071

Year	Payroll for Current		Payroll for Future		Total Employee		Contributions from		Employer	Employer Contributions	Total Contributions
	Employees	Employees	Employees	Employees	Payroll	Current Employees	Current Employees	Contributions for	Related to Payroll of		
	(a)	(b)=max(0,(c)-(a))	(c)	(d)	(e)=(a)*ER%	(f) = (b)*netER%	(g)=(d)+(e)+(f)				
2022	\$ 8,013,575	\$ 488,139	\$ 8,501,713	\$ 757,596	\$ 1,191,444	\$ -	\$ 1,949,040				
2023	7,611,323	1,209,205	8,820,528	701,764	1,103,642	-	1,805,406				
2024	7,294,809	1,856,489	9,151,298	672,581	1,057,747	-	1,730,328				
2025	6,752,935	2,741,537	9,494,472	622,621	979,176	-	1,601,797				
2026	6,350,968	3,499,547	9,850,515	585,559	920,890	-	1,506,449				
2027	6,079,766	4,140,143	10,219,909	560,554	881,566	-	1,442,120				
2028	5,837,316	4,765,840	10,603,156	538,201	846,411	-	1,384,612				
2029	5,541,822	5,458,952	11,000,774	510,956	803,564	-	1,314,520				
2030	5,151,695	6,261,608	11,413,303	474,986	746,996	-	1,221,982				
2031	4,900,579	6,940,723	11,841,302	451,833	710,584	-	1,162,417				
2032	4,788,651	7,496,700	12,285,351	441,514	694,354	-	1,135,868				
2033	4,626,496	8,119,556	12,746,052	426,563	670,842	-	1,097,405				
2034	4,426,987	8,797,042	13,224,029	408,168	641,913	-	1,050,081				
2035	4,141,081	9,578,849	13,719,930	381,808	600,457	-	982,265				
2036	3,888,420	10,346,007	14,234,427	358,512	563,821	-	922,333				
2037	3,726,028	11,042,190	14,768,218	343,540	540,274	-	883,814				
2038	3,461,812	11,860,214	15,322,026	319,179	501,963	10,227	831,369				
2039	2,964,450	12,932,152	15,896,602	273,322	429,845	22,978	726,145				
2040	2,510,281	13,982,444	16,492,725	231,448	363,991	30,661	626,100				
2041	2,234,834	14,876,368	17,111,202	206,052	324,051	44,200	574,303				
2042	1,882,564	15,870,308	17,752,872	173,572	272,972	57,147	503,691				
2043	1,592,151	16,826,454	18,418,605	146,796	230,862	67,761	445,419				
2044	1,199,355	17,909,948	19,109,303	110,581	173,907	82,395	366,883				
2045	851,911	18,973,991	19,825,902	78,546	123,527	88,467	290,540				
2046	651,146	19,918,227	20,569,373	60,036	94,416	100,987	255,439				
2047	393,551	20,947,173	21,340,724	36,285	57,065	109,063	202,413				
2048	239,573	21,901,428	22,141,001	22,089	34,738	118,022	174,849				
2049	157,866	22,813,423	22,971,289	14,555	22,891	126,621	164,067				
2050	138,605	23,694,107	23,832,712	12,779	20,098	135,667	168,544				
2051	66,907	24,659,532	24,726,439	6,169	9,702	143,144	159,015				
2052	-	25,653,680	25,653,680	-	-	149,519	149,519				
2053	-	26,615,693	26,615,693	-	-	157,929	157,929				
2054	-	27,613,781	27,613,781	-	-	167,125	167,125				
2055	-	28,649,298	28,649,298	-	-	176,631	176,631				
2056	-	29,723,647	29,723,647	-	-	188,142	188,142				
2057	-	30,838,284	30,838,284	-	-	199,634	199,634				
2058	-	31,994,720	31,994,720	-	-	210,977	210,977				
2059	-	33,194,522	33,194,522	-	-	223,607	223,607				
2060	-	34,439,317	34,439,317	-	-	236,937	236,937				
2061	-	35,730,791	35,730,791	-	-	250,182	250,182				
2062	-	37,070,696	37,070,696	-	-	261,985	261,985				
2063	-	38,460,847	38,460,847	-	-	271,995	271,995				
2064	-	39,903,129	39,903,129	-	-	282,924	282,924				
2065	-	41,399,496	41,399,496	-	-	293,436	293,436				
2066	-	42,951,977	42,951,977	-	-	303,235	303,235				
2067	-	44,562,676	44,562,676	-	-	311,647	311,647				
2068	-	46,233,776	46,233,776	-	-	318,701	318,701				
2069	-	47,967,543	47,967,543	-	-	328,256	328,256				
2070	-	49,766,326	49,766,326	-	-	337,616	337,616				
2071	-	51,632,563	51,632,563	-	-	347,233	347,233				



Single Discount Rate Development Projection of Contributions Ending December 31 for 2072 to 2121 (concluded)

Year	Payroll for Current	Payroll for Future	Total Employee	Contributions from	Employer	Employer Contributions	Total Contributions
	Employees	Employees	Payroll	Current Employees	Contributions for	Related to Payroll of	
	(a)	(b)=max(0,(c)-(a))	(c)	(d)	(e)=(a)*ER%	(f) = (b)*netER%	(g)=(d)+(e)+(f)
2072	\$ -	\$ 53,568,784	\$ 53,568,784	\$ -	\$ -	356,873	\$ 356,873
2073	-	55,577,613	55,577,613	-	-	367,771	367,771
2074	-	57,661,773	57,661,773	-	-	380,736	380,736
2075	-	59,824,089	59,824,089	-	-	393,982	393,982
2076	-	62,067,492	62,067,492	-	-	408,838	408,838
2077	-	64,395,023	64,395,023	-	-	424,441	424,441
2078	-	66,809,836	66,809,836	-	-	441,790	441,790
2079	-	69,315,205	69,315,205	-	-	459,842	459,842
2080	-	71,914,525	71,914,525	-	-	478,559	478,559
2081	-	74,611,320	74,611,320	-	-	498,573	498,573
2082	-	77,409,245	77,409,245	-	-	519,474	519,474
2083	-	80,312,092	80,312,092	-	-	540,877	540,877
2084	-	83,323,795	83,323,795	-	-	562,839	562,839
2085	-	86,448,437	86,448,437	-	-	585,399	585,399
2086	-	89,690,253	89,690,253	-	-	608,346	608,346
2087	-	93,053,637	93,053,637	-	-	631,766	631,766
2088	-	96,543,148	96,543,148	-	-	655,711	655,711
2089	-	100,163,516	100,163,516	-	-	680,252	680,252
2090	-	103,919,648	103,919,648	-	-	705,169	705,169
2091	-	107,816,635	107,816,635	-	-	730,473	730,473
2092	-	111,859,759	111,859,759	-	-	756,751	756,751
2093	-	116,054,500	116,054,500	-	-	783,919	783,919
2094	-	120,406,544	120,406,544	-	-	812,078	812,078
2095	-	124,921,789	124,921,789	-	-	841,118	841,118
2096	-	129,606,356	129,606,356	-	-	871,336	871,336
2097	-	134,466,594	134,466,594	-	-	903,154	903,154
2098	-	139,509,091	139,509,091	-	-	936,368	936,368
2099	-	144,740,682	144,740,682	-	-	971,098	971,098
2100	-	150,168,458	150,168,458	-	-	1,007,221	1,007,221
2101	-	155,799,775	155,799,775	-	-	1,045,120	1,045,120
2102	-	161,642,267	161,642,267	-	-	1,084,781	1,084,781
2103	-	167,703,852	167,703,852	-	-	1,126,027	1,126,027
2104	-	173,992,746	173,992,746	-	-	1,168,982	1,168,982
2105	-	180,517,474	180,517,474	-	-	1,213,591	1,213,591
2106	-	187,286,879	187,286,879	-	-	1,259,987	1,259,987
2107	-	194,310,137	194,310,137	-	-	1,308,059	1,308,059
2108	-	201,596,767	201,596,767	-	-	1,357,838	1,357,838
2109	-	209,156,646	209,156,646	-	-	1,409,375	1,409,375
2110	-	217,000,020	217,000,020	-	-	1,462,708	1,462,708
2111	-	225,137,521	225,137,521	-	-	1,517,857	1,517,857
2112	-	233,580,178	233,580,178	-	-	1,574,893	1,574,893
2113	-	242,339,435	242,339,435	-	-	1,633,909	1,633,909
2114	-	251,427,164	251,427,164	-	-	1,694,963	1,694,963
2115	-	260,855,683	260,855,683	-	-	1,758,170	1,758,170
2116	-	270,637,771	270,637,771	-	-	1,823,652	1,823,652
2117	-	280,786,687	280,786,687	-	-	1,891,553	1,891,553
2118	-	291,316,188	291,316,188	-	-	1,961,946	1,961,946
2119	-	302,240,545	302,240,545	-	-	2,034,959	2,034,959
2120	-	313,574,565	313,574,565	-	-	2,110,780	2,110,780
2121	-	325,333,611	325,333,611	-	-	2,189,533	2,189,533



Single Discount Rate Development Projection of Plan Net Position Ending December 31 for 2022 to 2071

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.800%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2022	\$ 43,795,214	\$ 1,949,099	\$ 2,359,700	\$ 40,411	\$ (2,970,950)	\$ 40,373,252
2023	40,373,252	1,805,406	2,524,821	37,046	2,720,084	42,336,876
2024	42,336,876	1,730,328	2,771,005	38,435	2,842,821	44,100,585
2025	44,100,585	1,601,797	3,086,579	39,877	2,947,854	45,523,780
2026	45,523,780	1,506,449	3,290,579	41,372	3,034,571	46,732,849
2027	46,732,849	1,442,120	3,425,365	42,924	3,110,077	47,816,757
2028	47,816,757	1,384,612	3,549,071	44,533	3,177,669	48,785,434
2029	48,785,434	1,314,520	3,712,176	46,203	3,235,685	49,577,260
2030	49,577,260	1,221,982	3,894,937	47,936	3,280,265	50,136,634
2031	50,136,634	1,162,417	3,993,246	49,733	3,312,963	50,569,036
2032	50,569,036	1,135,868	4,040,622	51,598	3,339,831	50,952,515
2033	50,952,515	1,097,405	4,115,464	53,533	3,362,054	51,242,977
2034	51,242,977	1,050,081	4,203,878	55,541	3,377,199	51,410,839
2035	51,410,839	982,265	4,337,652	57,624	3,381,803	51,379,630
2036	51,379,630	922,333	4,441,211	59,785	3,374,141	51,175,109
2037	51,175,109	883,814	4,485,925	62,027	3,357,376	50,868,346
2038	50,868,346	831,369	4,585,692	64,353	3,331,348	50,381,018
2039	50,381,018	726,145	4,809,250	66,766	3,287,134	49,518,281
2040	49,518,281	626,100	4,977,786	69,269	3,219,403	48,316,729
2041	48,316,729	574,303	5,035,246	71,867	3,133,957	46,917,875
2042	46,917,875	503,691	5,127,862	74,562	3,033,286	45,252,428
2043	45,252,428	445,419	5,164,480	77,358	2,916,769	43,372,778
2044	43,372,778	366,883	5,256,297	80,259	2,783,159	41,186,263
2045	41,186,263	290,540	5,296,706	83,269	2,630,471	38,727,299
2046	38,727,299	255,439	5,245,178	86,391	2,463,706	36,114,876
2047	36,114,876	202,413	5,216,004	89,631	2,285,155	33,296,810
2048	33,296,810	174,849	5,114,331	92,992	2,095,893	30,360,229
2049	30,360,229	164,067	4,961,432	96,479	1,900,841	27,367,226
2050	27,367,226	168,544	4,768,280	100,097	1,703,805	24,371,199
2051	24,371,199	159,015	4,611,586	103,851	1,504,871	21,319,647
2052	21,319,647	149,519	4,448,705	107,745	1,302,364	18,215,080
2053	18,215,080	157,929	4,243,081	111,786	1,098,276	15,116,418
2054	15,116,418	167,125	4,040,004	115,978	894,526	12,022,087
2055	12,022,087	176,631	3,839,587	120,327	690,986	8,929,789
2056	8,929,789	188,142	3,641,690	124,839	487,561	5,838,963
2057	5,838,963	199,634	3,446,054	129,521	284,155	2,747,177
2058	2,747,177	210,977	3,252,197	134,378	80,613	-
2059	-	223,607	3,059,611	139,417	-	-
2060	-	236,937	2,867,905	144,645	-	-
2061	-	250,182	2,676,700	150,069	-	-
2062	-	261,985	2,485,837	155,697	-	-
2063	-	271,995	2,295,403	161,536	-	-
2064	-	282,924	2,105,656	167,593	-	-
2065	-	293,436	1,917,322	173,878	-	-
2066	-	303,235	1,731,558	180,398	-	-
2067	-	311,647	1,549,664	187,163	-	-
2068	-	318,701	1,373,220	194,182	-	-
2069	-	328,256	1,204,001	201,464	-	-
2070	-	337,616	1,043,770	209,019	-	-
2071	-	347,233	894,236	216,857	-	-



Single Discount Rate Development Projection of Plan Net Position Ending December 31 for 2072 to 2121 (concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.800%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2072	\$ -	\$ 356,873	\$ 756,775	\$ 224,989	\$ -	\$ -
2073	-	367,771	632,347	233,426	-	-
2074	-	380,736	521,490	242,179	-	-
2075	-	393,982	424,271	251,261	-	-
2076	-	408,838	340,341	260,683	-	-
2077	-	424,441	269,037	270,459	-	-
2078	-	441,790	209,520	280,601	-	-
2079	-	459,842	160,723	291,124	-	-
2080	-	478,559	121,397	302,041	-	-
2081	-	498,573	90,274	313,368	-	-
2082	-	519,474	66,080	325,119	-	-
2083	-	540,877	47,594	337,311	-	-
2084	-	562,839	33,708	349,960	-	-
2085	-	585,399	23,455	363,083	-	-
2086	-	608,346	16,019	376,699	-	-
2087	-	631,766	10,726	390,825	-	-
2088	-	655,711	7,030	405,481	-	-
2089	-	680,252	4,505	420,687	-	-
2090	-	705,169	2,819	436,463	-	-
2091	-	730,473	1,719	452,830	-	-
2092	-	756,751	1,020	469,811	-	-
2093	-	783,919	588	487,429	-	-
2094	-	812,078	329	505,707	-	-
2095	-	841,118	178	524,672	-	-
2096	-	871,336	93	544,347	-	-
2097	-	903,154	47	564,760	-	-
2098	-	936,368	24	585,938	-	-
2099	-	971,098	12	607,911	-	-
2100	-	1,007,221	6	630,708	-	-
2101	-	1,045,120	3	654,359	-	-
2102	-	1,084,781	1	678,898	-	-
2103	-	1,126,027	1	704,356	-	-
2104	-	1,168,982	0	730,770	-	-
2105	-	1,213,591	-	758,173	-	-
2106	-	1,259,987	-	786,605	-	-
2107	-	1,308,059	-	816,103	-	-
2108	-	1,357,838	-	846,706	-	-
2109	-	1,409,375	-	878,458	-	-
2110	-	1,462,708	-	911,400	-	-
2111	-	1,517,857	-	945,578	-	-
2112	-	1,574,893	-	981,037	-	-
2113	-	1,633,909	-	1,017,826	-	-
2114	-	1,694,963	-	1,055,994	-	-
2115	-	1,758,170	-	1,095,594	-	-
2116	-	1,823,652	-	1,136,679	-	-
2117	-	1,891,553	-	1,179,304	-	-
2118	-	1,961,946	-	1,223,528	-	-
2119	-	2,034,959	-	1,269,410	-	-
2120	-	2,110,780	-	1,317,013	-	-
2121	-	2,189,533	-	1,366,401	-	-



Single Discount Rate Development Present Values of Projected Benefits Ending December 31 for 2022 to 2071

Year	Projected Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected 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 All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ⁿ ((a)-.5)	(g)=(e)*vf ⁿ ((a)-.5)	(h)=((c)/(1+SDR)) ⁿ (a-.5)
2022	\$ 43,795,214	\$ 2,359,700	\$ 2,359,700	\$ 0	\$ 2,283,343	\$ 0	\$ 2,288,304
2023	40,373,252	2,524,821	2,524,821	0	2,287,566	0	2,302,510
2024	42,336,876	2,771,005	2,771,005	0	2,350,765	0	2,376,416
2025	44,100,585	3,086,579	3,086,579	0	2,451,761	0	2,489,296
2026	45,523,780	3,290,579	3,290,579	0	2,447,381	0	2,495,660
2027	46,732,849	3,425,365	3,425,365	0	2,385,421	0	2,443,060
2028	47,816,757	3,549,071	3,549,071	0	2,314,203	0	2,380,433
2029	48,785,434	3,712,176	3,712,176	0	2,266,439	0	2,341,444
2030	49,577,260	3,894,937	3,894,937	0	2,226,613	0	2,310,307
2031	50,136,634	3,993,246	3,993,246	0	2,137,466	0	2,227,458
2032	50,569,036	4,040,622	4,040,622	0	2,025,117	0	2,119,559
2033	50,952,515	4,115,464	4,115,464	0	1,931,299	0	2,030,160
2034	51,242,977	4,203,878	4,203,878	0	1,847,181	0	1,950,184
2035	51,410,839	4,337,652	4,337,652	0	1,784,608	0	1,892,319
2036	51,379,630	4,441,211	4,441,211	0	1,710,875	0	1,822,028
2037	51,175,109	4,485,925	4,485,925	0	1,618,071	0	1,730,691
2038	50,868,346	4,585,692	4,585,692	0	1,548,743	0	1,663,744
2039	50,381,018	4,809,250	4,809,250	0	1,520,829	0	1,640,866
2040	49,518,281	4,977,786	4,977,786	0	1,473,900	0	1,597,151
2041	48,316,729	5,035,246	5,035,246	0	1,395,987	0	1,519,303
2042	46,917,875	5,127,862	5,127,862	0	1,331,146	0	1,455,037
2043	45,252,428	5,164,480	5,164,480	0	1,255,292	0	1,378,093
2044	43,372,778	5,256,297	5,256,297	0	1,196,263	0	1,319,003
2045	41,186,263	5,296,706	5,296,706	0	1,128,708	0	1,249,930
2046	38,727,299	5,245,178	5,245,178	0	1,046,561	0	1,164,003
2047	36,114,876	5,216,004	5,216,004	0	974,476	0	1,088,544
2048	33,296,810	5,114,331	5,114,331	0	894,645	0	1,003,716
2049	30,360,229	4,961,432	4,961,432	0	812,639	0	915,679
2050	27,367,226	4,768,280	4,768,280	0	731,276	0	827,584
2051	24,371,199	4,611,586	4,611,586	0	662,214	0	752,687
2052	21,319,647	4,448,705	4,448,705	0	598,150	0	682,829
2053	18,215,080	4,243,081	4,243,081	0	534,179	0	612,454
2054	15,116,418	4,040,004	4,040,004	0	476,229	0	548,388
2055	12,022,087	3,839,587	3,839,587	0	423,787	0	490,123
2056	8,929,789	3,641,690	3,641,690	0	376,352	0	437,157
2057	5,838,963	3,446,054	3,446,054	0	333,459	0	389,019
2058	2,747,177	3,252,197	2,839,045	413,151	257,230	97,000	345,254
2059	0	3,059,611	0	3,059,611	0	690,380	305,452
2060	0	2,867,905	0	2,867,905	0	621,934	269,250
2061	0	2,676,700	0	2,676,700	0	557,876	236,322
2062	0	2,485,837	0	2,485,837	0	497,930	206,391
2063	0	2,295,403	0	2,295,403	0	441,888	179,222
2064	0	2,105,656	0	2,105,656	0	389,582	154,609
2065	0	1,917,322	0	1,917,322	0	340,929	132,390
2066	0	1,731,558	0	1,731,558	0	295,913	112,438
2067	0	1,549,664	0	1,549,664	0	254,521	94,629
2068	0	1,373,220	0	1,373,220	0	216,762	78,857
2069	0	1,204,001	0	1,204,001	0	182,653	65,020
2070	0	1,043,770	0	1,043,770	0	152,182	53,007
2071	0	894,236	0	894,236	0	125,305	42,707



Single Discount Rate Development

Present Values of Projected Benefits

Ending December 31 for 2072 to 2121 (concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected 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 All 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))
2072	\$ 0	\$ 756,775	\$ 0	\$ 756,775	\$ 0	\$ 101,916	\$ 33,988
2073	0	632,347	0	632,347	0	81,844	26,707
2074	0	521,490	0	521,490	0	64,869	20,713
2075	0	424,271	0	424,271	0	50,721	15,847
2076	0	340,341	0	340,341	0	39,104	11,954
2077	0	269,037	0	269,037	0	29,708	8,887
2078	0	209,520	0	209,520	0	22,236	6,508
2079	0	160,723	0	160,723	0	16,393	4,695
2080	0	121,397	0	121,397	0	11,900	3,335
2081	0	90,274	0	90,274	0	8,505	2,332
2082	0	66,080	0	66,080	0	5,983	1,605
2083	0	47,594	0	47,594	0	4,142	1,087
2084	0	33,708	0	33,708	0	2,819	724
2085	0	23,455	0	23,455	0	1,885	474
2086	0	16,019	0	16,019	0	1,237	304
2087	0	10,726	0	10,726	0	796	192
2088	0	7,030	0	7,030	0	502	118
2089	0	4,505	0	4,505	0	309	71
2090	0	2,819	0	2,819	0	186	42
2091	0	1,719	0	1,719	0	109	24
2092	0	1,020	0	1,020	0	62	13
2093	0	588	0	588	0	34	7
2094	0	329	0	329	0	18	4
2095	0	178	0	178	0	10	2
2096	0	93	0	93	0	5	1
2097	0	47	0	47	0	2	0
2098	0	24	0	24	0	1	0
2099	0	12	0	12	0	1	0
2100	0	6	0	6	0	0	0
2101	0	3	0	3	0	0	0
2102	0	1	0	1	0	0	0
2103	0	1	0	1	0	0	0
2104	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0
2109	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0
2113	0	0	0	0	0	0	0
2114	0	0	0	0	0	0	0
2115	0	0	0	0	0	0	0
2116	0	0	0	0	0	0	0
2117	0	0	0	0	0	0	0
2118	0	0	0	0	0	0	0
2119	0	0	0	0	0	0	0
2120	0	0	0	0	0	0	0
2121	0	0	0	0	0	0	0
Totals					\$ 53,040,172	\$ 5,310,153	\$ 58,350,325



SECTION H

GLOSSARY OF TERMS

Glossary of Terms

Accrued Service	Service credited under the system that was rendered before the date of the actuarial valuation.
Actuarial Accrued Liability (AAL)	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."
Actuarial Assumptions	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.
Actuarial Cost Method	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.
Actuarial Equivalent	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.
Actuarial Gain (Loss)	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.
Actuarial Present Value (APV)	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 payments at predetermined rates of interest and probabilities of payment.
Actuarial Valuation	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.
Actuarial Valuation Date	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)	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

Amortization Method	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).
Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)	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.
Covered-Employee Payroll	The payroll of employees that are provided with pensions through the pension plan.
Deferred Inflows and Outflows	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.
Deferred Retirement Option Program (DROP)	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.

Glossary of Terms

Discount Rate

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:

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; and
2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Entry Age Actuarial Cost Method (EAN)

The EAN is a cost 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 ages(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.

Fiduciary Net Position

The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Money-Weighted Rate of Return

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.

Multiple-Employer Defined Benefit Pension Plan

A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

Municipal Bond Rate

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.

Net Pension Liability (NPL)

The NPL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan.



Glossary of Terms

Other Postemployment Benefits (OPEB)	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 post-employment benefits do not include termination benefits.
Real Rate of Return	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
Service Cost	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total Pension Expense	<p>The total pension expense is the sum of the following items that are recognized at the end of the employer’s fiscal year:</p> <ol style="list-style-type: none">1. Service Cost2. Interest on the Total Pension Liability3. Current-Period Benefit Changes4. Employee Contributions (made negative for addition here)5. Projected Earnings on Plan Investments (made negative for addition here)6. Pension Plan Administrative Expense7. Other Changes in Plan Fiduciary Net Position8. Recognition of Outflow (Inflow) of Resources due to Liabilities9. Recognition of Outflow (Inflow) of Resources due to Assets
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 assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.