

# Wyoming Judicial Retirement System

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

For Measurement Date as of December 31, 2024





April 8, 2025

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, 2024 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 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.

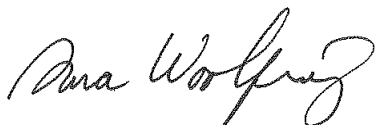
Paul T. Wood, Thomas A. Lyle, Dana Woolfrey, and Karli Fehrman are members of the American Academy of Actuaries (MAAA) and are experienced in performing valuations for public retirement systems. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. 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, 2024

	2024	
Actuarial Valuation Date	January 1, 2024	
Measurement Date of the Net Pension Liability	December 31, 2024	
Employer's Fiscal Year Ending Date (Reporting Date)	December 31, 2024	
Membership		
Number of		
- Retirees and Beneficiaries		39
- Inactive, Nonretired Members		5
- Active Members		55
- Total		99
Covered Payroll	\$	8,664,447
Net Pension Liability		
Total Pension Liability	\$	46,805,667
Plan Fiduciary Net Position		49,177,368
Net Pension Liability	\$	(2,371,701)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability		105.07 %
Net Pension Liability as a Percentage of Covered Payroll		(27.37)%
Development of the Single Discount Rate		
Single Discount Rate		6.80 %
Long-Term Expected Rate of Investment Return		6.80 %
Long-Term Municipal Bond Rate*		4.08 %
Last year ending December 31 in the 2024 to 2123 projection period for which projected benefit payments are fully funded		2123
Total Pension Expense	\$	845,112
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	\$ 333,524	\$ 763,336
Changes in assumptions	1,565,346	1,370,055
Net difference between projected and actual earnings on pension plan investments	2,373,578	3,665,060
Total	\$ 4,272,448	\$ 5,798,451

\*Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Bond Buyer's "20-Bond GO Index" as of December 31, 2024.



# 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, 2024.

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 funded status of the plan is expected to stay above 100% in future years.

This funding policy results in no expected crossover date and a GASB single discount rate of 6.80%. This funding policy results in the expectation that the plan's assets will be able to fully pay for promised benefits through at least 2123. 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, 2024 and rolled forward to a measurement date of December 31, 2024.

## 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 4.08% (based on the daily rate closest to but not later than the measurement date of the Bond Buyer "20-Bond GO Index"); and the resulting Single Discount Rate is 6.80%.

## 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

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### 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, 2024

### A. Expense

1. Service Cost	\$ 2,233,117
2. Interest on the Total Pension Liability	3,001,892
3. Current-Period Benefit Changes	0
4. Employee Contributions (made negative for addition here)	(941,018)
5. Projected Earnings on Plan Investments (made negative for addition here)	(3,050,390)
6. Pension Plan Administrative Expense	44,103
7. Other Changes in Plan Fiduciary Net Position	3,285
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	241,542
9. Recognition of Outflow (Inflow) of Resources due to Assets	(687,419)
<b>10. Total Pension Expense</b>	<b>\$ 845,112 *</b>

\* 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, 2024

## A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (65,026)
2. Assumption Changes (gains) or losses	\$ 0
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	6.2214
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	\$ (10,452)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for assumption changes	\$ 0
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	<u>\$ (10,452)</u>
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	\$ (54,574)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for assumption changes	\$ 0
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	<u>\$ (54,574)</u>

## B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (1,621,624)
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	\$ (324,325)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (1,297,299)

# History of Deferred Outflows and Inflows of Resources by Source

## Fiscal Year Ended December 31, 2024

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

Recognition Period	7.7907	7.3715	6.7663	6.7746	6.6532	6.8706	6.3142	5.8576	6.2849	6.2214		Deferred Net (Inflows)/Outflows at Measurement
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total	
<b>Total</b>	<b>\$ (372,108)</b>	<b>\$ (229,282)</b>	<b>\$ (620,955)</b>	<b>\$ 183,937</b>	<b>\$ (112,158)</b>	<b>\$ 1,225,009</b>	<b>\$ (147,370)</b>	<b>\$ (658,488)</b>	<b>\$ (473,026)</b>	<b>\$ (65,026)</b>		
2015	(47,763)										(47,763)	
2016	(47,763)	(31,104)									(78,867)	
2017	(47,763)	(31,104)	(91,772)								(170,639)	
2018	(47,763)	(31,104)	(91,772)	27,151							(143,488)	
2019	(47,763)	(31,104)	(91,772)	27,151	(16,858)						(160,346)	
2020	(47,763)	(31,104)	(91,772)	27,151	(16,858)	178,297					17,951	
2021	(47,763)	(31,104)	(91,772)	27,151	(16,858)	178,297	(23,339)				(5,388)	
2022	(37,767)	(31,104)	(91,772)	27,151	(16,858)	178,297	(23,339)	(112,416)			(107,808)	
2023	-	(11,554)	(70,323)	27,151	(16,858)	178,297	(23,339)	(112,416)	(75,264)		(104,306)	
2024	-	-	-	21,031	(16,858)	178,297	(23,339)	(112,416)	(75,264)	(10,452)	(39,001)	
2025	-	-	-	-	(11,010)	178,297	(23,339)	(112,416)	(75,264)	(10,452)	(54,184)	\$ (429,812)
2026	-	-	-	-	-	155,227	(23,339)	(112,416)	(75,264)	(10,452)	(66,244)	
2027	-	-	-	-	-	-	(7,336)	(96,408)	(75,264)	(10,452)	(189,460)	
2028	-	-	-	-	-	-	-	-	(75,264)	(10,452)	(85,716)	
2029	-	-	-	-	-	-	-	-	(21,442)	(10,452)	(31,894)	
Thereafter	-	-	-	-	-	-	-	-	-	(2,314)	(2,314)	
	<b>\$ (372,108)</b>	<b>\$ (229,282)</b>	<b>\$ (620,955)</b>	<b>\$ 183,937</b>	<b>\$ (112,158)</b>	<b>\$ 1,225,009</b>	<b>\$ (147,370)</b>	<b>\$ (658,488)</b>	<b>\$ (473,026)</b>	<b>\$ (65,026)</b>	<b>\$ (1,269,467)</b>	

### Assumption changes - Net (inflows)/outflows of resources

Recognition Period	7.7907	7.3715	6.7663	6.7746	6.6532	6.8706	6.3142	5.8576	6.2849	6.2214		
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total	
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,258,668</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,743,269</b>	<b>\$ 1,899,013</b>	<b>\$ (2,009,535)</b>	<b>\$ -</b>		
2015	-										-	
2016	-	-									-	
2017	-	-	333,811								333,811	
2018	-	-	333,811	-							333,811	
2019	-	-	333,811	-	-						333,811	
2020	-	-	333,811	-	-	-					333,811	
2021	-	-	333,811	-	-	-	276,087				609,898	
2022	-	-	333,811	-	-	-	276,087	324,196			934,094	
2023	-	-	255,802	-	-	-	276,087	324,196	(319,740)		536,345	
2024	-	-	-	-	-	-	276,087	324,196	(319,740)	-	280,543	
2025	-	-	-	-	-	-	276,087	324,196	(319,740)	-	280,543	\$ 195,291
2026	-	-	-	-	-	-	276,087	324,196	(319,740)	-	280,543	
2027	-	-	-	-	-	-	86,747	278,033	(319,740)	-	45,040	
2028	-	-	-	-	-	-	-	-	(319,740)	-	(319,740)	
2029	-	-	-	-	-	-	-	-	(91,095)	-	(91,095)	
Thereafter	-	-	-	-	-	-	-	-	-	-	-	
	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,258,668</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,743,269</b>	<b>\$ 1,899,013</b>	<b>\$ (2,009,535)</b>	<b>\$ -</b>	<b>\$ 3,891,415</b>	



## History of Deferred Outflows and Inflows of Resources by Source

### Fiscal Year Ended December 31, 2024 (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	5.0000	Deferred Net (Inflows)/Outflows at Measurement
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total	
Total	\$ 2,022,635	\$ 138,916	\$ (1,759,558)	\$ 3,092,625	\$ (3,228,107)	\$ (1,240,511)	\$ (3,843,928)	\$ 5,933,942	\$ (2,664,963)	\$ (1,621,624)	\$ (3,170,573)	
2015	404,527										404,527	
2016	404,527	27,783									432,310	
2017	404,527	27,783	(351,912)								80,398	
2018	404,527	27,783	(351,912)	618,525							698,923	
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	(532,993)		(1,008,716)	
2024	-	-	-	-	-	(248,103)	(768,786)	1,186,788	(532,993)	(324,325)	(687,419)	
2025	-	-	-	-	-	-	(768,784)	1,186,788	(532,993)	(324,325)	(439,314)	\$ (1,291,482)
2026	-	-	-	-	-	-	-	1,186,790	(532,993)	(324,325)	329,472	
2027	-	-	-	-	-	-	-	-	(532,991)	(324,325)	(857,316)	
2028	-	-	-	-	-	-	-	-	-	(324,324)	(324,324)	
2029	-	-	-	-	-	-	-	-	-	-	-	
Thereafter	-	-	-	-	-	-	-	-	-	-	-	

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

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total	
Total	\$ 1,650,527	\$ (90,366)	\$ (121,845)	\$ 3,276,562	\$ (3,340,265)	\$ (15,502)	\$ (2,248,029)	\$ 7,174,467	\$ (5,147,524)	\$ (1,686,650)	\$ (548,625)	
2015	356,764										356,764	
2016	356,764	(3,321)									353,443	
2017	356,764	(3,321)	(109,873)								243,570	
2018	356,764	(3,321)	(109,873)	645,676							889,246	
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	(927,997)		(576,677)	
2024	-	-	-	21,031	(16,858)	(69,806)	(516,038)	1,398,568	(927,997)	(334,777)	(445,877)	
2025	-	-	-	-	(11,010)	178,297	(516,036)	1,398,568	(927,997)	(334,777)	(212,955)	\$ (1,526,003)
2026	-	-	-	-	-	155,227	252,748	1,398,570	(927,997)	(334,777)	543,771	
2027	-	-	-	-	-	-	79,411	181,625	(927,995)	(334,777)	(1,001,736)	
2028	-	-	-	-	-	-	-	-	(395,004)	(334,776)	(729,780)	
2029	-	-	-	-	-	-	-	-	(112,537)	(10,452)	(122,989)	
Thereafter	-	-	-	-	-	-	-	-	-	(2,314)	(2,314)	



# Statement of Outflows and Inflows

## Arising from Current and Prior Reporting Periods

### Fiscal Year Ended December 31, 2024

#### 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	\$ 799,611	\$ 558,069	\$ 241,542
2. Due to Assets	1,186,788	1,874,207	(687,419)
<b>3. Total</b>	<b>\$ 1,986,399</b>	<b>\$ 2,432,276</b>	<b>\$ (445,877)</b>

#### 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	\$ 199,328	\$ 238,329	\$ (39,001)
2. Assumption Changes	600,283	319,740	280,543
3. Net Difference between projected and actual earnings on pension plan investments	1,186,788	1,874,207	(687,419)
<b>4. Total</b>	<b>\$ 1,986,399</b>	<b>\$ 2,432,276</b>	<b>\$ (445,877)</b>

#### 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	\$ 333,524	\$ 763,336	\$ (429,812)
2. Assumption Changes	1,565,346	1,370,055	195,291
3. Net Difference between projected and actual earnings on pension plan investments	2,373,578	3,665,060	(1,291,482)
<b>4. Total</b>	<b>\$ 4,272,448</b>	<b>\$ 5,798,451</b>	<b>\$ (1,526,003)</b>

#### 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
2025	\$ (212,955)
2026	543,771
2027	(1,001,736)
2028	(729,780)
2029	(122,989)
Thereafter	(2,314)
<b>Total</b>	<b>\$ (1,526,003)</b>





## Statement of Fiduciary Net Position as of December 31, 2024

	<u>2024</u>
<b>Assets</b>	
Cash and Deposits	\$ 2,693,017
Receivables	
Accounts Receivable - Sale of Investments	\$ 435,840
Accrued Interest and Other Dividends	96,437
Contributions	0
Accounts Receivable - Other	2,802,876
Total Receivables	<u>\$ 3,335,153</u>
Investments	
Fixed Income	\$ 7,903,453
Equities	23,376,658
Private Markets	6,064,659
Marketable Alternatives	8,782,282
Security Lending Collateral	1,733,214
Capital Assets, at Cost, Net of Accumulated Depreciation	7,472
Total Investments	<u>\$ 47,867,738</u>
<b>Total Assets</b>	<u>\$ 53,895,908</u>
<b>Liabilities</b>	
Payables	
Accounts Payable - Purchase of Investments	\$ 4,646,406
Accrued Expenses	72,134
Accounts Payable - Other	0
<b>Total Liabilities</b>	<u>\$ 4,718,540</u>
<b>Net Position Restricted for Pensions</b>	<u>\$ 49,177,368</u>

## Statement of Changes in Fiduciary Net Position for Year Ended December 31, 2024

	<u>2024</u>
<b>Additions</b>	
Contributions	
Employer	\$ 1,316,586
Employee	941,018
Other - Employer	0
Other - Employee	0
Total Contributions	<u>\$ 2,257,604</u>
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 4,032,783
Interest and Dividends	990,412
Less Investment Expense	<u>(351,181)</u>
Net Investment Income	<u>\$ 4,672,014</u>
Other	<u>\$ 0</u>
<b>Total Additions</b>	<u><u>\$ 6,929,618</u></u>
 <b>Deductions</b>	
Benefit Payments, including Refunds of Employee Contributions	\$ 2,905,439
Pension Plan Administrative Expense	44,103
Other	<u>3,285</u>
<b>Total Deductions</b>	<u><u>\$ 2,952,827</u></u>
 <b>Net Increase in Net Position</b>	 \$ 3,976,791
 <b>Net Position Restricted for Pensions</b>	
Beginning of Year	<u>\$ 45,200,577</u>
End of Year	<u><u>\$ 49,177,368</u></u>

## SECTION C

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### **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, 2024

<b>A. Total pension liability</b>	
1. Service cost	\$ 2,233,117
2. Interest on the total pension liability	3,001,892
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the total pension liability	(65,026)
5. Changes of assumptions	0
6. Benefit payments, including refunds of employee contributions	(2,905,439)
<b>7. Net change in total pension liability</b>	<b>2,264,544</b>
<b>8. Total pension liability – beginning</b>	<b>44,541,123</b>
<b>9. Total pension liability – ending</b>	<b>\$ 46,805,667</b>
<b>B. Plan fiduciary net position</b>	
1. Contributions – employer	\$ 1,316,586
2. Contributions – employee	941,018
3. Net investment income	4,672,014
4. Benefit payments, including refunds of employee contributions	(2,905,439)
5. Pension plan administrative expense	(44,103)
6. Other	(3,285)
<b>7. Net change in plan fiduciary net position</b>	<b>3,976,791</b>
<b>8. Plan fiduciary net position – beginning</b>	<b>45,200,577</b>
<b>9. Plan fiduciary net position – ending</b>	<b>\$ 49,177,368</b>
<b>C. Net pension liability</b>	<b>\$ (2,371,701)</b>
<b>D. Plan fiduciary net position as a percentage of the total pension liability</b>	
	105.07 %
<b>E. Covered-employee payroll</b>	<b>\$ 8,664,447</b>
<b>F. Net pension liability as a percentage of covered-employee payroll</b>	
	(27.37)%

## Schedules of Required Supplementary Information

### Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Fiscal year ending December 31,	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
<b>Total pension liability</b>										
Service cost	\$ 2,233,117	\$ 2,360,406	\$ 2,110,197	\$ 2,006,844	\$ 1,713,172	\$ 1,529,896	\$ 1,509,964	\$ 1,470,668	\$ 1,263,270	\$ 1,263,278
Interest on the total pension liability	3,001,892	2,780,674	2,717,927	2,592,567	2,393,270	2,168,200	2,037,989	1,880,909	1,793,779	1,659,184
Changes of benefit terms	0	0	0	0	0	0	0	0	0	0
Difference between expected and actual experience	(65,026)	(473,026)	(658,488)	(147,370)	1,225,009	(112,158)	183,937	(620,955)	(229,282)	(372,108)
Changes of assumptions	0	(2,009,535)	1,899,013	1,743,269	0	0	0	2,258,668	0	0
Benefit payments, including refunds of employee contributions	(2,905,439)	(2,577,048)	(2,359,700)	(1,943,586)	(1,878,084)	(1,720,417)	(1,454,953)	(1,166,423)	(981,321)	(931,621)
<b>Net change in total pension liability</b>	<b>2,264,544</b>	<b>81,471</b>	<b>3,708,949</b>	<b>4,251,724</b>	<b>3,453,367</b>	<b>1,865,521</b>	<b>2,276,937</b>	<b>3,822,867</b>	<b>1,846,446</b>	<b>1,618,733</b>
<b>Total pension liability - beginning</b>	<b>44,541,123</b>	<b>44,459,652</b>	<b>40,750,703</b>	<b>36,498,979</b>	<b>33,045,612</b>	<b>31,180,091</b>	<b>28,903,154</b>	<b>25,080,287</b>	<b>23,233,841</b>	<b>21,615,108</b>
<b>Total pension liability - ending (a)</b>	<b>\$ 46,805,667</b>	<b>\$ 44,541,123</b>	<b>\$ 44,459,652</b>	<b>\$ 40,750,703</b>	<b>\$ 36,498,979</b>	<b>\$ 33,045,612</b>	<b>\$ 31,180,091</b>	<b>\$ 28,903,154</b>	<b>\$ 25,080,287</b>	<b>\$ 23,233,841</b>
<b>Plan fiduciary net position</b>										
Employer contributions	\$ 1,316,586	\$ 1,258,235	\$ 1,191,503	\$ 1,171,758	\$ 1,135,182	\$ 1,060,477	\$ 960,478	\$ 949,300	\$ 925,971	\$ 920,867
Employee contributions	941,018	799,521	757,596	745,064	721,821	1,028,339	610,818	603,602	588,791	585,545
Pension plan net investment income	4,672,014	5,391,478	(2,970,950)	6,389,711	3,612,442	5,224,148	(1,038,644)	3,549,526	1,679,033	(228,304)
Benefit payments, including refunds of employee contributions	(2,905,439)	(2,577,048)	(2,359,700)	(1,943,586)	(1,878,084)	(1,720,417)	(1,454,953)	(1,166,423)	(981,321)	(931,621)
Pension plan administrative expense	(44,103)	(41,723)	(37,872)	(35,804)	(32,231)	(27,764)	(28,405)	(25,315)	(22,090)	(17,833)
Other	(3,285)	(3,138)	(2,539)	(1,347)	(1,283)	(1,284)	(1,146)	(2,313)	(1,128)	(1,072)
<b>Net change in plan fiduciary net position</b>	<b>3,976,791</b>	<b>4,827,325</b>	<b>(3,421,962)</b>	<b>6,325,796</b>	<b>3,557,847</b>	<b>5,563,499</b>	<b>(951,852)</b>	<b>3,908,377</b>	<b>2,189,256</b>	<b>327,582</b>
<b>Plan fiduciary net position - beginning</b>	<b>45,200,577</b>	<b>40,373,252</b>	<b>43,795,214</b>	<b>37,469,418</b>	<b>33,911,571</b>	<b>28,348,072</b>	<b>29,299,924</b>	<b>25,391,547</b>	<b>23,202,291</b>	<b>22,874,709</b>
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 49,177,368</b>	<b>\$ 45,200,577</b>	<b>\$ 40,373,252</b>	<b>\$ 43,795,214</b>	<b>\$ 37,469,418</b>	<b>\$ 33,911,571</b>	<b>\$ 28,348,072</b>	<b>\$ 29,299,924</b>	<b>\$ 25,391,547</b>	<b>\$ 23,202,291</b>
<b>Net pension liability - ending (a) - (b)</b>	<b>\$ (2,371,701)</b>	<b>\$ (659,454)</b>	<b>\$ 4,086,400</b>	<b>\$ (3,044,511)</b>	<b>\$ (970,439)</b>	<b>\$ (865,959)</b>	<b>\$ 2,832,019</b>	<b>\$ (396,770)</b>	<b>\$ (311,260)</b>	<b>\$ 31,550</b>
<b>Plan fiduciary net position as a percentage of total pension liability</b>	<b>105.07 %</b>	<b>101.48 %</b>	<b>90.81 %</b>	<b>107.47 %</b>	<b>102.66 %</b>	<b>102.62 %</b>	<b>90.92 %</b>	<b>101.37 %</b>	<b>101.24 %</b>	<b>99.86 %</b>
<b>Covered-employee payroll</b>	<b>\$ 8,664,447</b>	<b>\$ 8,433,335</b>	<b>\$ 8,194,423</b>	<b>\$ 7,886,295</b>	<b>\$ 7,410,536</b>	<b>\$ 6,602,303</b>	<b>\$ 6,558,029</b>	<b>\$ 6,386,001</b>	<b>\$ 6,384,628</b>	<b>\$ 6,363,028</b>
<b>Projected Valuation Payroll</b>	<b>\$ 8,989,364</b>	<b>\$ 8,749,585</b>	<b>\$ 8,501,713</b>	<b>\$ 8,182,031</b>	<b>\$ 7,706,958</b>	<b>\$ 6,866,395</b>	<b>\$ 6,820,351</b>	<b>\$ 6,641,441</b>	<b>\$ 6,624,052</b>	<b>\$ 6,601,641</b>
<b>Net pension liability as a percentage of covered-employee payroll</b>	<b>(27.37)%</b>	<b>(7.82)%</b>	<b>49.87 %</b>	<b>(38.61)%</b>	<b>(13.10)%</b>	<b>(13.12)%</b>	<b>43.18 %</b>	<b>(6.21)%</b>	<b>(4.88)%</b>	<b>0.50 %</b>

**Notes to Schedule:**

For 2024 through 2015, "Other" changes to Plan Fiduciary Net Position includes other funding sources and depreciation expenses.



## Schedules of Required Supplementary Information

### Schedule of Net Pension Liability Multiyear

<u>FY Ending December 31,</u>	<u>Total Pension Liability</u>	<u>Plan Net Position</u>	<u>Net Pension Liability</u>	<u>Plan Net Position as a % of Total Pension Liability</u>	<u>Covered Payroll*</u>	<u>Net Pension Liability as a % of Covered Payroll</u>
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 %
2023	44,541,123	45,200,577	(659,454)	101.48 %	8,433,335	(7.82)%
2024	46,805,667	49,177,368	(2,371,701)	105.07 %	8,664,447	(27.37)%

\* 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

<u>FY Ending December 31,</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll*</u>	<u>Actual Contribution as a % of Covered Payroll</u>
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 %
2023	1,465,658	1,258,235	207,423	8,433,335	14.92 %
2024	1,338,943	1,316,586	22,357	8,664,447	15.20 %

\* 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

<b>Valuation Date:</b>	January 1, 2024
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	N/A
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. The employee is currently contributing at the rate of 11.47% of salary. The roll-forward methodology employed for purposes of the GASB disclosures is based on generally accepted actuarial methods.
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## Schedule of Investment Returns Multiyear Last 10 Fiscal Years

FY Ending December 31,	Annual Return <sup>1</sup>
2015	(0.26)%
2016	7.60 %
2017	14.20 %
2018	(3.52)%
2019	18.72 %
2020	11.03 %
2021	17.19 %
2022	(6.99)%
2023	13.84 %
2024	10.54 %

<sup>1</sup> Annual money-weighted rate of return, net of investment expenses.

## SECTION D

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### 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 6.80% 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 4.08%. 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 was projected to be available to make 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.

### 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 6.80%, 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

Current Single Discount		
1% Decrease	Rate Assumption	1% Increase
5.80%	6.80%	7.80%
\$ (195,846)	\$ (2,371,701)	\$ (8,571,363)

## Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	39
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	5
Active Plan Members	<u>55</u>
Total Plan Members	99

## SECTION E

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### SUMMARY OF BENEFITS

## Summary of Benefits

<b>Covered Members</b>	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.
<b>Final Average Salary</b>	Employee's average annual salary for the highest paid three continuous years of service.
<b>Form of Payment</b>	Monthly benefit for life. Upon death, 50% of the benefit continues to be paid to the beneficiary.
<b>Service Retirement</b>	
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"><li>• 4% for each of the first five years of service,</li><li>• 3% for each year from and including the sixth year through the fifteenth year of service,</li><li>• 2% for each year from and including the sixteenth year through the twentieth year of service,</li><li>• 1% for each year thereafter.</li></ul>
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.
<b>Disability Retirement</b>	
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	Effective July 1, 2024, the employee contribution rate increased to 11.47% 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

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### **ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS**



## Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the January 1, 2024 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 1<sup>st</sup>, 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 6.80%), 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.

#### 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 2024 using the MP-2020 Ultimate Scale					
	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.34%	0.19%
25	0.02%	0.01%	0.02%	0.01%	0.23%	0.14%
30	0.03%	0.01%	0.03%	0.01%	0.29%	0.21%
35	0.04%	0.02%	0.04%	0.02%	0.38%	0.33%
40	0.05%	0.03%	0.05%	0.03%	0.53%	0.52%
45	0.08%	0.05%	0.09%	0.06%	0.83%	0.81%
50	0.12%	0.07%	0.25%	0.19%	1.33%	1.23%
55	0.18%	0.10%	0.36%	0.24%	1.75%	1.44%
60	0.26%	0.15%	0.51%	0.33%	2.07%	1.62%
65	0.39%	0.25%	0.76%	0.53%	2.53%	1.88%
70	0.59%	0.41%	1.28%	0.92%	3.28%	2.40%
75			2.27%	1.64%	4.40%	3.39%
80			4.09%	2.96%	6.29%	5.15%
85			7.60%	5.66%	9.57%	8.26%
90			13.43%	10.83%	14.88%	12.51%
95			21.64%	18.33%	22.33%	18.25%
100			31.27%	27.81%	31.27%	27.00%

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	Rate	Age	Rate
55	2%	64	2%
56	2%	65	25%
57	2%	66	15%
58	2%	67	15%
59	2%	68	15%
60	2%	69	15%
61	2%	70	100%
62	2%	71	100%
63	2%	72	100%

## 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, whichever is more valuable at the time of termination.
- 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.
- 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

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### 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 4.08%; and the resulting Single Discount Rate is 6.80%.

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 2024 to 2073

Year	Payroll for Current Employees	Payroll for Future Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for Current Employees	Employer Contributions Related to Payroll of Future Employees	Total Contributions
	(a)	(b)=max(0,(c)-(a))	(c)	(d)	(e)=(a)*ER%	(f) = (b)*netER%	(g)=(d)+(e)+(f)
2024	\$ 8,612,893	\$ 376,471	\$ 8,989,364	\$ 941,018	\$ 1,316,586	\$ -	\$ 2,257,604
2025	8,240,276	1,086,189	9,326,465	945,160	1,194,840	11,934	2,151,934
2026	7,953,410	1,722,797	9,676,207	912,256	1,153,245	18,979	2,084,480
2027	7,673,473	2,365,592	10,039,065	880,147	1,112,654	26,129	2,018,930
2028	7,471,292	2,944,238	10,415,530	856,957	1,083,337	33,265	1,973,559
2029	7,250,862	3,555,250	10,806,112	831,674	1,051,375	41,977	1,925,026
2030	6,953,246	4,258,095	11,211,341	797,537	1,008,221	52,767	1,858,525
2031	6,795,392	4,836,374	11,631,766	779,431	985,332	63,567	1,828,330
2032	6,714,122	5,353,835	12,067,957	770,110	973,548	75,398	1,819,056
2033	6,560,584	5,959,921	12,520,505	752,499	951,285	90,588	1,794,372
2034	6,377,161	6,612,863	12,990,024	731,460	924,688	108,901	1,765,049
2035	6,193,017	7,284,133	13,477,150	710,339	897,987	129,533	1,737,859
2036	5,982,372	8,000,171	13,982,543	686,178	867,444	153,075	1,706,697
2037	5,734,952	8,771,936	14,506,888	657,799	831,568	178,510	1,667,877
2038	5,380,030	9,670,866	15,050,896	617,089	780,104	207,874	1,605,067
2039	4,813,397	10,801,908	15,615,305	552,097	697,943	241,980	1,492,020
2040	4,319,691	11,881,188	16,200,879	495,469	626,355	272,911	1,394,735
2041	3,965,193	12,843,219	16,808,412	454,808	574,953	306,698	1,336,459
2042	3,562,903	13,875,824	17,438,727	408,665	516,621	340,853	1,266,139
2043	3,224,624	14,868,055	18,092,679	369,864	467,570	375,437	1,212,871
2044	2,720,830	16,050,324	18,771,154	312,079	394,520	417,546	1,124,145
2045	2,256,070	17,219,002	19,475,072	258,771	327,130	452,616	1,038,517
2046	1,972,523	18,232,864	20,205,387	226,248	286,016	493,119	1,005,383
2047	1,675,693	19,287,396	20,963,089	192,202	242,975	531,425	966,602
2048	1,430,031	20,319,174	21,749,205	164,025	207,354	572,402	943,781
2049	1,168,506	21,396,294	22,564,800	134,028	169,433	612,512	915,973
2050	1,018,073	22,392,907	23,410,980	116,773	147,621	651,251	915,645
2051	832,609	23,456,283	24,288,892	95,500	120,728	693,836	910,064
2052	662,192	24,537,533	25,199,725	75,953	96,018	731,564	903,535
2053	473,064	25,671,651	26,144,715	54,260	68,594	774,909	897,763
2054	271,475	26,853,667	27,125,142	31,138	39,364	812,556	883,058
2055	238,564	27,903,771	28,142,335	27,363	34,592	852,885	914,840
2056	209,589	28,988,084	29,197,673	24,040	30,390	893,344	947,774
2057	184,077	30,108,509	30,292,586	21,114	26,691	934,051	981,856
2058	88,874	31,339,684	31,428,558	10,194	12,887	978,462	1,001,543
2059	-	32,607,129	32,607,129	-	-	1,021,337	1,021,337
2060	-	33,829,896	33,829,896	-	-	1,065,831	1,065,831
2061	-	35,098,517	35,098,517	-	-	1,110,453	1,110,453
2062	-	36,414,711	36,414,711	-	-	1,155,926	1,155,926
2063	-	37,780,263	37,780,263	-	-	1,202,135	1,202,135
2064	-	39,197,023	39,197,023	-	-	1,250,105	1,250,105
2065	-	40,666,911	40,666,911	-	-	1,298,079	1,298,079
2066	-	42,191,920	42,191,920	-	-	1,346,595	1,346,595
2067	-	43,774,117	43,774,117	-	-	1,396,414	1,396,414
2068	-	45,415,646	45,415,646	-	-	1,446,828	1,446,828
2069	-	47,118,733	47,118,733	-	-	1,499,808	1,499,808
2070	-	48,885,685	48,885,685	-	-	1,553,700	1,553,700
2071	-	50,718,898	50,718,898	-	-	1,609,511	1,609,511
2072	-	52,620,857	52,620,857	-	-	1,667,392	1,667,392
2073	-	54,594,139	54,594,139	-	-	1,728,026	1,728,026



# Single Discount Rate Development

## Projection of Contributions

### Ending December 31 for 2074 to 2123 (concluded)

Year	Payroll for Current Employees	Payroll for Future Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for Current Employees	Employer Contributions Related to Payroll of Future Employees	Total Contributions
	(a)	(b)=max(0,(c)-(a))	(c)	(d)	(e)=(a)*ER%	(f) = (b)*netER%	(g)=(d)+(e)+(f)
2074	\$ -	\$ 56,641,419	\$ 56,641,419	\$ -	\$ -	\$ 1,791,857	\$ 1,791,857
2075	-	58,765,472	58,765,472	-	-	1,857,551	1,857,551
2076	-	60,969,177	60,969,177	-	-	1,926,299	1,926,299
2077	-	63,255,521	63,255,521	-	-	1,997,607	1,997,607
2078	-	65,627,603	65,627,603	-	-	2,072,821	2,072,821
2079	-	68,088,638	68,088,638	-	-	2,151,410	2,151,410
2080	-	70,641,962	70,641,962	-	-	2,232,410	2,232,410
2081	-	73,291,036	73,291,036	-	-	2,316,699	2,316,699
2082	-	76,039,450	76,039,450	-	-	2,404,350	2,404,350
2083	-	78,890,929	78,890,929	-	-	2,495,780	2,495,780
2084	-	81,849,339	81,849,339	-	-	2,590,789	2,590,789
2085	-	84,918,689	84,918,689	-	-	2,688,855	2,688,855
2086	-	88,103,140	88,103,140	-	-	2,790,604	2,790,604
2087	-	91,407,008	91,407,008	-	-	2,896,123	2,896,123
2088	-	94,834,771	94,834,771	-	-	3,005,677	3,005,677
2089	-	98,391,075	98,391,075	-	-	3,119,025	3,119,025
2090	-	102,080,740	102,080,740	-	-	3,235,902	3,235,902
2091	-	105,908,768	105,908,768	-	-	3,357,248	3,357,248
2092	-	109,880,347	109,880,347	-	-	3,483,133	3,483,133
2093	-	114,000,860	114,000,860	-	-	3,613,520	3,613,520
2094	-	118,275,892	118,275,892	-	-	3,748,374	3,748,374
2095	-	122,711,238	122,711,238	-	-	3,888,078	3,888,078
2096	-	127,312,909	127,312,909	-	-	4,033,177	4,033,177
2097	-	132,087,143	132,087,143	-	-	4,183,738	4,183,738
2098	-	137,040,411	137,040,411	-	-	4,339,920	4,339,920
2099	-	142,179,426	142,179,426	-	-	4,502,031	4,502,031
2100	-	147,511,154	147,511,154	-	-	4,670,299	4,670,299
2101	-	153,042,822	153,042,822	-	-	4,845,074	4,845,074
2102	-	158,781,928	158,781,928	-	-	5,026,610	5,026,610
2103	-	164,736,250	164,736,250	-	-	5,215,039	5,215,039
2104	-	170,913,859	170,913,859	-	-	5,410,658	5,410,658
2105	-	177,323,129	177,323,129	-	-	5,613,743	5,613,743
2106	-	183,972,746	183,972,746	-	-	5,824,591	5,824,591
2107	-	190,871,724	190,871,724	-	-	6,043,455	6,043,455
2108	-	198,029,414	198,029,414	-	-	6,270,492	6,270,492
2109	-	205,455,517	205,455,517	-	-	6,506,049	6,506,049
2110	-	213,160,099	213,160,099	-	-	6,750,457	6,750,457
2111	-	221,153,603	221,153,603	-	-	7,004,021	7,004,021
2112	-	229,446,863	229,446,863	-	-	7,267,032	7,267,032
2113	-	238,051,120	238,051,120	-	-	7,539,762	7,539,762
2114	-	246,978,037	246,978,037	-	-	7,822,668	7,822,668
2115	-	256,239,713	256,239,713	-	-	8,116,120	8,116,120
2116	-	265,848,702	265,848,702	-	-	8,420,491	8,420,491
2117	-	275,818,028	275,818,028	-	-	8,736,178	8,736,178
2118	-	286,161,204	286,161,204	-	-	9,063,599	9,063,599
2119	-	296,892,249	296,892,249	-	-	9,403,270	9,403,270
2120	-	308,025,708	308,025,708	-	-	9,755,665	9,755,665
2121	-	319,576,672	319,576,672	-	-	10,121,243	10,121,243
2122	-	331,560,797	331,560,797	-	-	10,500,509	10,500,509
2123	-	343,994,327	343,994,327	-	-	10,894,003	10,894,003



# Single Discount Rate Development

## Projection of Plan Net Position

### Ending December 31 for 2024 to 2073

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)
2024	\$ 45,200,577	\$ 2,257,604	\$ 2,905,439	\$ 47,388	\$ 4,672,014	\$ 49,177,368
2025	49,177,368	2,151,934	3,043,760	42,902	3,312,803	51,555,443
2026	51,555,443	2,084,480	3,213,175	44,511	3,466,537	53,848,774
2027	53,848,774	2,018,930	3,375,452	46,180	3,614,809	56,060,881
2028	56,060,881	1,973,559	3,498,000	47,911	3,759,559	58,248,087
2029	58,248,087	1,925,026	3,650,460	49,708	3,901,508	60,374,453
2030	60,374,453	1,858,525	3,883,054	51,572	4,036,036	62,334,388
2031	62,334,388	1,828,330	3,986,435	53,506	4,164,780	64,287,558
2032	64,287,558	1,819,056	4,038,503	55,513	4,295,477	66,308,075
2033	66,308,075	1,794,372	4,127,601	57,594	4,428,998	68,346,250
2034	68,346,250	1,765,049	4,227,938	59,754	4,563,186	70,386,792
2035	70,386,792	1,737,859	4,329,260	61,995	4,697,570	72,430,966
2036	72,430,966	1,706,697	4,477,035	64,320	4,830,512	74,426,821
2037	74,426,821	1,667,877	4,597,187	66,732	4,960,834	76,391,613
2038	76,391,613	1,605,067	4,768,809	69,234	5,086,516	78,245,153
2039	78,245,153	1,492,020	5,059,807	71,830	5,198,959	79,804,495
2040	79,804,495	1,394,735	5,295,934	74,524	5,293,754	81,122,527
2041	81,122,527	1,336,459	5,418,588	77,319	5,377,236	82,340,314
2042	82,340,314	1,266,139	5,561,548	80,218	5,452,817	83,417,504
2043	83,417,504	1,212,871	5,656,394	83,226	5,521,012	84,411,767
2044	84,411,767	1,124,145	5,839,175	86,347	5,579,438	85,189,828
2045	85,189,828	1,038,517	5,973,156	89,585	5,624,894	85,790,498
2046	85,790,498	1,005,383	5,996,170	92,945	5,663,749	86,370,515
2047	86,370,515	966,602	6,015,064	96,430	5,701,145	86,926,769
2048	86,926,769	943,781	5,996,026	100,046	5,738,723	87,513,201
2049	87,513,201	915,973	5,977,331	103,798	5,778,170	88,126,215
2050	88,126,215	915,645	5,882,894	107,691	5,822,872	88,874,148
2051	88,874,148	910,064	5,814,523	111,729	5,875,696	89,733,656
2052	89,733,656	903,535	5,727,133	115,919	5,936,707	90,730,846
2053	90,730,846	897,763	5,655,254	120,266	6,006,581	91,859,671
2054	91,859,671	883,058	5,580,180	124,776	6,085,209	93,122,982
2055	93,122,982	914,840	5,393,520	129,455	6,178,263	94,693,110
2056	94,693,110	947,774	5,203,539	134,309	6,292,324	96,595,360
2057	96,595,360	981,856	5,010,043	139,346	6,429,119	98,856,945
2058	98,856,945	1,001,543	4,865,315	144,571	6,588,230	101,436,832
2059	101,436,832	1,021,337	4,707,730	149,993	6,769,413	104,369,859
2060	104,369,859	1,065,831	4,484,576	155,618	6,977,621	107,773,116
2061	107,773,116	1,110,453	4,258,339	161,453	7,217,905	111,681,682
2062	111,681,682	1,155,926	4,028,833	167,508	7,492,680	116,133,947
2063	116,133,947	1,202,135	3,796,152	173,789	7,804,551	121,170,692
2064	121,170,692	1,250,105	3,546,317	180,306	8,156,790	126,850,964
2065	126,850,964	1,298,079	3,310,512	187,068	8,552,312	133,203,775
2066	133,203,775	1,346,595	3,074,523	194,083	8,993,583	140,275,347
2067	140,275,347	1,396,414	2,838,454	201,361	9,483,767	148,115,713
2068	148,115,713	1,446,828	2,603,992	208,912	10,026,186	156,775,822
2069	156,775,822	1,499,808	2,373,076	216,746	10,624,305	166,310,113
2070	166,310,113	1,553,700	2,139,748	224,874	11,281,970	176,781,161
2071	176,781,161	1,609,511	1,921,728	233,307	12,002,876	188,238,513
2072	188,238,513	1,667,392	1,715,462	242,056	12,790,517	200,738,904
2073	200,738,904	1,728,026	1,517,200	251,133	13,648,898	214,347,494



# Single Discount Rate Development

## Projection of Plan Net Position

### Ending December 31 for 2074 to 2123 (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)
2074	\$ 214,347,494	\$ 1,791,857	\$ 1,332,805	\$ 260,551	\$ 14,582,268	\$ 229,128,263
2075	229,128,263	1,857,551	1,163,920	270,321	15,594,878	245,146,451
2076	245,146,451	1,926,299	1,008,619	280,458	16,691,268	262,474,941
2077	262,474,941	1,997,607	867,174	290,975	17,876,368	281,190,768
2078	281,190,768	2,072,821	739,643	301,887	19,155,459	301,377,519
2079	301,377,519	2,151,410	625,778	313,208	20,534,216	323,124,159
2080	323,124,159	2,232,410	525,123	324,953	22,018,669	346,525,163
2081	346,525,163	2,316,699	436,948	337,139	23,615,297	371,683,072
2082	371,683,072	2,404,350	360,316	349,781	25,331,106	398,708,432
2083	398,708,432	2,495,780	294,275	362,898	27,173,658	427,720,697
2084	427,720,697	2,590,789	237,855	376,507	29,151,101	458,848,224
2085	458,848,224	2,688,855	190,148	390,626	31,272,175	492,228,480
2086	492,228,480	2,790,604	150,237	405,274	33,546,280	528,009,854
2087	528,009,854	2,896,123	117,189	420,472	35,983,539	566,351,855
2088	566,351,855	3,005,677	90,172	436,240	38,594,835	607,425,955
2089	607,425,955	3,119,025	68,387	452,599	41,391,846	651,415,840
2090	651,415,840	3,235,902	51,058	469,571	44,387,078	698,518,190
2091	698,518,190	3,357,248	37,476	487,180	47,593,961	748,944,744
2092	748,944,744	3,483,133	27,000	505,450	51,026,916	802,922,343
2093	802,922,343	3,613,520	19,064	524,404	54,701,385	860,693,780
2094	860,693,780	3,748,374	13,171	544,069	58,633,891	922,518,805
2095	922,518,805	3,888,078	8,890	564,472	62,842,126	988,675,646
2096	988,675,646	4,033,177	5,853	585,639	67,345,037	1,059,462,368
2097	1,059,462,368	4,183,738	3,751	607,601	72,162,905	1,135,197,658
2098	1,135,197,658	4,339,920	2,337	630,386	77,317,413	1,216,222,267
2099	1,216,222,267	4,502,031	1,414	654,025	82,831,748	1,302,900,607
2100	1,302,900,607	4,670,299	830	678,551	88,730,701	1,395,622,226
2101	1,395,622,226	4,845,074	472	703,997	95,040,777	1,494,803,607
2102	1,494,803,607	5,026,610	260	730,397	101,790,306	1,600,889,866
2103	1,600,889,866	5,215,039	138	757,787	109,009,561	1,714,356,541
2104	1,714,356,541	5,410,658	71	786,204	116,730,888	1,835,711,813
2105	1,835,711,813	5,613,743	36	815,686	124,988,853	1,965,498,687
2106	1,965,498,687	5,824,591	18	846,275	133,820,389	2,104,297,375
2107	2,104,297,375	6,043,455	9	878,010	143,264,958	2,252,727,769
2108	2,252,727,769	6,270,492	4	910,935	153,364,716	2,411,452,038
2109	2,411,452,038	6,506,049	2	945,095	164,164,702	2,581,177,692
2110	2,581,177,692	6,750,457	1	980,536	175,713,034	2,762,660,646
2111	2,762,660,646	7,004,021	0	1,017,307	188,061,125	2,956,708,485
2112	2,956,708,485	7,267,032	-	1,055,456	201,263,897	3,164,183,958
2113	3,164,183,958	7,539,762	-	1,095,035	215,380,026	3,386,008,712
2114	3,386,008,712	7,822,668	-	1,136,099	230,472,197	3,623,167,478
2115	3,623,167,478	8,116,120	-	1,178,703	246,607,382	3,876,712,276
2116	3,876,712,276	8,420,491	-	1,222,904	263,857,128	4,147,766,992
2117	4,147,766,992	8,736,178	-	1,268,763	282,297,872	4,437,532,279
2118	4,437,532,279	9,063,599	-	1,316,342	302,011,270	4,747,290,806
2119	4,747,290,806	9,403,270	-	1,365,704	323,084,558	5,078,412,929
2120	5,078,412,929	9,755,665	-	1,416,918	345,610,934	5,432,362,610
2121	5,432,362,610	10,121,243	-	1,470,053	369,689,961	5,810,703,761
2122	5,810,703,761	10,500,509	-	1,525,180	395,427,998	6,215,107,089
2123	6,215,107,089	10,894,003	-	1,582,374	422,938,671	6,647,357,388



# Single Discount Rate Development

## Present Values of Projected Benefits

### Ending December 31 for 2024 to 2073

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)]
2024	\$ 45,200,577	\$ 2,905,439	\$ 2,905,439	\$ 0	\$ 2,811,423	\$ 0	\$ 2,811,423
2025	49,177,368	3,043,760	3,043,760	0	2,757,741	0	2,757,741
2026	51,555,443	3,213,175	3,213,175	0	2,725,877	0	2,725,877
2027	53,848,774	3,375,452	3,375,452	0	2,681,221	0	2,681,221
2028	56,060,881	3,498,000	3,498,000	0	2,601,652	0	2,601,652
2029	58,248,087	3,650,460	3,650,460	0	2,542,176	0	2,542,176
2030	60,374,453	3,883,054	3,883,054	0	2,531,980	0	2,531,980
2031	62,334,388	3,986,435	3,986,435	0	2,433,886	0	2,433,886
2032	64,287,558	4,038,503	4,038,503	0	2,308,686	0	2,308,686
2033	66,308,075	4,127,601	4,127,601	0	2,209,382	0	2,209,382
2034	68,346,250	4,227,938	4,227,938	0	2,118,998	0	2,118,998
2035	70,386,792	4,329,260	4,329,260	0	2,031,628	0	2,031,628
2036	72,430,966	4,477,035	4,477,035	0	1,967,206	0	1,967,206
2037	74,426,821	4,597,187	4,597,187	0	1,891,386	0	1,891,386
2038	76,391,613	4,768,809	4,768,809	0	1,837,074	0	1,837,074
2039	78,245,153	5,059,807	5,059,807	0	1,825,070	0	1,825,070
2040	79,804,495	5,295,934	5,295,934	0	1,788,615	0	1,788,615
2041	81,122,527	5,418,588	5,418,588	0	1,713,520	0	1,713,520
2042	82,340,314	5,561,548	5,561,548	0	1,646,749	0	1,646,749
2043	83,417,504	5,656,394	5,656,394	0	1,568,196	0	1,568,196
2044	84,411,767	5,839,175	5,839,175	0	1,515,796	0	1,515,796
2045	85,189,828	5,973,156	5,973,156	0	1,451,851	0	1,451,851
2046	85,790,498	5,996,170	5,996,170	0	1,364,648	0	1,364,648
2047	86,370,515	6,015,064	6,015,064	0	1,281,787	0	1,281,787
2048	86,926,769	5,996,026	5,996,026	0	1,196,376	0	1,196,376
2049	87,513,201	5,977,331	5,977,331	0	1,116,710	0	1,116,710
2050	88,126,215	5,882,894	5,882,894	0	1,029,089	0	1,029,089
2051	88,874,148	5,814,523	5,814,523	0	952,368	0	952,368
2052	89,733,656	5,727,133	5,727,133	0	878,328	0	878,328
2053	90,730,846	5,655,254	5,655,254	0	812,082	0	812,082
2054	91,859,671	5,580,180	5,580,180	0	750,283	0	750,283
2055	93,122,982	5,393,520	5,393,520	0	679,013	0	679,013
2056	94,693,110	5,203,539	5,203,539	0	613,385	0	613,385
2057	96,595,360	5,010,043	5,010,043	0	552,974	0	552,974
2058	98,856,945	4,865,315	4,865,315	0	502,809	0	502,809
2059	101,436,832	4,707,730	4,707,730	0	455,546	0	455,546
2060	104,369,859	4,484,576	4,484,576	0	406,322	0	406,322
2061	107,773,116	4,258,339	4,258,339	0	361,259	0	361,259
2062	111,681,682	4,028,833	4,028,833	0	320,027	0	320,027
2063	116,133,947	3,796,152	3,796,152	0	282,344	0	282,344
2064	121,170,692	3,546,317	3,546,317	0	246,969	0	246,969
2065	126,850,964	3,310,512	3,310,512	0	215,868	0	215,868
2066	133,203,775	3,074,523	3,074,523	0	187,715	0	187,715
2067	140,275,347	2,838,454	2,838,454	0	162,268	0	162,268
2068	148,115,713	2,603,992	2,603,992	0	139,386	0	139,386
2069	156,775,822	2,373,076	2,373,076	0	118,938	0	118,938
2070	166,310,113	2,139,748	2,139,748	0	100,415	0	100,415
2071	176,781,161	1,921,728	1,921,728	0	84,442	0	84,442
2072	188,238,513	1,715,462	1,715,462	0	70,579	0	70,579
2073	200,738,904	1,517,200	1,517,200	0	58,447	0	58,447



# Single Discount Rate Development

## Present Values of Projected Benefits

### Ending December 31 for 2074 to 2123 (concluded)

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^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=[(c)/(1+SDR)^(a-.5)]
2074	\$ 214,347,494	\$ 1,332,805	\$ 1,332,805	\$ 0	\$ 48,075	\$ 0	\$ 48,075
2075	229,128,263	1,163,920	1,163,920	0	39,310	0	39,310
2076	245,146,451	1,008,619	1,008,619	0	31,896	0	31,896
2077	262,474,941	867,174	867,174	0	25,677	0	25,677
2078	281,190,768	739,643	739,643	0	20,506	0	20,506
2079	301,377,519	625,778	625,778	0	16,245	0	16,245
2080	323,124,159	525,123	525,123	0	12,764	0	12,764
2081	346,525,163	436,948	436,948	0	9,944	0	9,944
2082	371,683,072	360,316	360,316	0	7,678	0	7,678
2083	398,708,432	294,275	294,275	0	5,872	0	5,872
2084	427,720,697	237,855	237,855	0	4,444	0	4,444
2085	458,848,224	190,148	190,148	0	3,326	0	3,326
2086	492,228,480	150,237	150,237	0	2,461	0	2,461
2087	528,009,854	117,189	117,189	0	1,797	0	1,797
2088	566,351,855	90,172	90,172	0	1,295	0	1,295
2089	607,425,955	68,387	68,387	0	920	0	920
2090	651,415,840	51,058	51,058	0	643	0	643
2091	698,518,190	37,476	37,476	0	442	0	442
2092	748,944,744	27,000	27,000	0	298	0	298
2093	802,922,343	19,064	19,064	0	197	0	197
2094	860,693,780	13,171	13,171	0	127	0	127
2095	922,518,805	8,890	8,890	0	81	0	81
2096	988,675,646	5,853	5,853	0	50	0	50
2097	1,059,462,368	3,751	3,751	0	30	0	30
2098	1,135,197,658	2,337	2,337	0	17	0	17
2099	1,216,222,267	1,414	1,414	0	10	0	10
2100	1,302,900,607	830	830	0	5	0	5
2101	1,395,622,226	472	472	0	3	0	3
2102	1,494,803,607	260	260	0	1	0	1
2103	1,600,889,866	138	138	0	1	0	1
2104	1,714,356,541	71	71	0	0	0	0
2105	1,835,711,813	36	36	0	0	0	0
2106	1,965,498,687	18	18	0	0	0	0
2107	2,104,297,375	9	9	0	0	0	0
2108	2,252,727,769	4	4	0	0	0	0
2109	2,411,452,038	2	2	0	0	0	0
2110	2,581,177,692	1	1	0	0	0	0
2111	2,762,660,646	0	0	0	0	0	0
2112	2,956,708,485	0	0	0	0	0	0
2113	3,164,183,958	0	0	0	0	0	0
2114	3,386,008,712	0	0	0	0	0	0
2115	3,623,167,478	0	0	0	0	0	0
2116	3,876,712,276	0	0	0	0	0	0
2117	4,147,766,992	0	0	0	0	0	0
2118	4,437,532,279	0	0	0	0	0	0
2119	4,747,290,806	0	0	0	0	0	0
2120	5,078,412,929	0	0	0	0	0	0
2121	5,432,362,610	0	0	0	0	0	0
2122	5,810,703,761	0	0	0	0	0	0
2123	6,215,107,089	0	0	0	0	0	0
<b>Totals</b>					\$ 62,134,604	\$ 0	\$ 62,134,604



## SECTION H

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### GLOSSARY OF TERMS

## Glossary of Terms

<b>Accrued Service</b>	Service credited under the system that was rendered before the date of the actuarial valuation.
<b>Actuarial Accrued Liability (AAL)</b>	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."
<b>Actuarial Assumptions</b>	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.
<b>Actuarial Cost Method</b>	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.
<b>Actuarial Equivalent</b>	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.
<b>Actuarial Gain (Loss)</b>	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.
<b>Actuarial Present Value (APV)</b>	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.
<b>Actuarial Valuation</b>	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.
<b>Actuarial Valuation Date</b>	The date as of which an actuarial valuation is performed.
<b>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</b>	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

<b>Amortization Method</b>	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).
<b>Amortization Payment</b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b>Cost-of-Living Adjustments</b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</b>	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.
<b>Covered-Employee Payroll</b>	The payroll of employees that are provided with pensions through the pension plan.
<b>Deferred Inflows and Outflows</b>	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.
<b>Deferred Retirement Option Program (DROP)</b>	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

<b>Other Postemployment Benefits (OPEB)</b>	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.
<b>Real Rate of Return</b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b>Service Cost</b>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<b>Total Pension Expense</b>	<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"><li>1. Service Cost</li><li>2. Interest on the Total Pension Liability</li><li>3. Current-Period Benefit Changes</li><li>4. Employee Contributions (made negative for addition here)</li><li>5. Projected Earnings on Plan Investments (made negative for addition here)</li><li>6. Pension Plan Administrative Expense</li><li>7. Other Changes in Plan Fiduciary Net Position</li><li>8. Recognition of Outflow (Inflow) of Resources due to Liabilities</li><li>9. Recognition of Outflow (Inflow) of Resources due to Assets</li></ol>
<b>Total Pension Liability (TPL)</b>	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<b>Unfunded Actuarial Accrued Liability (UAAL)</b>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<b>Valuation Assets</b>	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.