

Employees' Retirement System of the State of Hawaii

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

June 30, 2024



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March 17, 2025

The Board of Trustees
Employees' Retirement System of
The State of Hawaii
City Financial Tower
201 Merchant St., Ste. 1400
Honolulu, HI 96813-9280

Dear Trustees:

This report provides information required by the Employees' Retirement System of the State of Hawaii ("ERS") in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 "Financial Reporting for Pension Plans." Additionally, this report provides information required by the employers covered by ERS in connection with the GASB Statement No. 68, "Accounting and Financial Reporting for Pensions." The GASB 68 information shown was determined as of June 30, 2024, but it is intended that the employers covered by ERS will use this information in financial reporting for their fiscal years ending June 30, 2024.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement Nos. 67 and 68. The calculation of the plan's liability for this report may not be applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the ERS only in its entirety and only with the permission of ERS.

This report is based upon information, furnished to us by ERS, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not otherwise audited.

Certain tables included in the Required Supplementary Information should include a 10-year history of information. As provided for in GASB No. 67, this historical information is only presented for the years in which the information was measured in conformity with the requirements of GASB No. 67.

Section E of the report details the calculation of the single discount rate and is not required to be included in your financial statements. However, this information may be requested by your auditors, therefore, we have included it in this report.

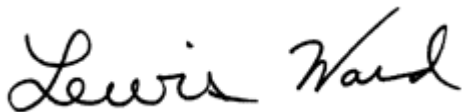
Section F contains both the aggregate GASB No. 68 information on a plan wide level and the schedules with the individual employers' information.

This report complements the actuarial valuation report that was provided to ERS and should be considered in conjunction with that report. Please see the actuarial valuation report as of June 30, 2024 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, this report is complete, accurate, and in accordance with generally recognized actuarial methods. One or more of the undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinion herein.

The signing actuaries are independent of the plan sponsor.

Respectfully submitted,



By _____
Lewis Ward
Consultant



By _____
Joseph P. Newton, FSA, EA
Pension Market Leader & Actuary



SECTION A

EXECUTIVE SUMMARY

Executive Summary as of June 30, 2024

	2024
Actuarial Valuation Date	June 30, 2024
Pension Plan's Fiscal Year Ending Date (Measurement Date & Reporting Date)	June 30, 2024
Membership	
Number of	
- Retirees and Beneficiaries	55,820
- Inactive, Nonretired Members	37,403
- Active Members	65,337
- Total	158,560
Reported Payroll for Fiscal Year	\$ 4,948,188,592
Net Pension Liability	
Total Pension Liability	\$ 37,849,517,735
Plan Fiduciary Net Position	23,700,632,356
Net Pension Liability	\$ 14,148,885,379
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	62.62%
Net Pension Liability as a Percentage of Covered Payroll	285.94%
Development of the Single Discount Rate	
Single Discount Rate	7.00%
Long-Term Expected Rate of Return	7.00%
Long-Term Municipal Bond Rate*	3.97%
Last year ending June 30 in the 2024 to 2123 projection period for which projected benefit payments are fully funded	None

**Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity's Index's "20-year Municipal GO AA Index" as of June 30, 2024. 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, “Financial Reporting for Pension Plans,” replaces the requirements of GASB Statement No. 25, “Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans,” and GASB Statement No. 50, “Pension Disclosures.” GASB Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability of employers and non-employer contributing entities for benefits provided through the pension plan.

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 will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 67 requires defined benefit pension plans to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position.

The *statement of fiduciary net position* presents the following items as of the end of the pension plan’s reporting period, such as:

- assets;
- deferred inflows and outflows of resources;
- liabilities; and
- fiduciary net position (assets, plus deferred outflows, minus liabilities, minus deferred inflows).

The *statement of changes in fiduciary net position* presents the following for the plan’s reporting period:

- additions, such as contributions and investment income;
- deductions, such as benefit payments and expenses; and
- net increase or decrease in the fiduciary net position (the difference between additions and deductions).

Notes to Financial Statements

GASB Statement No. 67 also requires the notes of the plan's financial statements to include additional disclosure information. This disclosure information should include:

- a description of the types of benefits provided by the plan, as well as automatic or ad hoc COLAs;
- the number and classes of employees covered by the benefit terms;
- the composition of the pension plan's Board and the authority under which benefit terms may be amended;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- a description of how fair value is determined;
- concentrations of investments greater than or equal to 5%;
- annual money-weighted rate of return on pension plan investments;
- the portion of the present value of benefits to be provided through the pension plan to current active and inactive plan members;
- the pension plan's fiduciary net position;
- the net pension liability;
- the pension plan's fiduciary net position as a percentage of the total pension liability;
- 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.

Required Supplementary Information

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;
- comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy; and
- the annual money-weighted rate of return on pension plan investments for each year.

As shown above, you will need to include a determination of the annual money-weighted rate of return for your Notes to Financial Statements and Required Supplementary Information. Statement No. 67 requires that this information be determined using cash-flows with a frequency of not less than a monthly basis. We do not have the detailed financial information to determine this number. If you need our assistance please let us know.



Measurement of the Net Pension Liability

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

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 June 30, 2024 and a measurement date of June 30, 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 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 7.00% the municipal bond rate is 3.97% (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 7.00%.

Effective Date and Transition

GASB Statements No. 67 is effective for a pension plan's fiscal years beginning after June 15, 2013, however, earlier application is encouraged by the GASB. GASB Statement No. 68 is effective for an employer's fiscal year beginning after June 30, 2014.



SECTION B

FINANCIAL STATEMENTS

Statement of Fiduciary Net Position as of June 30, 2024

	<u>2024</u>
Assets	
Cash and Deposits	\$ 816,534,332
Receivables	
Accounts receivable and others	\$ 3,797,764
Investment sales proceeds	118,165,686
Accrued investment income	42,228,081
Employer and Member contributions	146,686,334
Other	0
Total Receivables	<u>\$ 310,877,865</u>
Investments	
Equity securities	\$ 5,277,362,997
Fixed income securities	5,199,978,914
Real asset investments	4,261,689,706
Alternative investments	8,027,013,307
Total Investments	<u>\$ 22,766,044,924</u>
Invested Securities Lending Collateral	\$ 765,590,308
Equipment at cost, net of depreciation	<u>\$ 2,954,114</u>
Total Assets	<u>\$ 24,662,001,543</u>
Liabilities	
Payables	
Accounts and other payables	\$ 92,405,819
Payables for securities purchased	103,373,060
Securities lending collateral	765,590,308
Notes payable	0
Total Liabilities	<u>\$ 961,369,187</u>
Net Position Restricted for Pensions	<u>\$ 23,700,632,356</u>



Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2024

	Year Ending June 30, 2024
Additions	
Contributions	
Non-Employer Contributing Entity	\$ 0
Employer	1,396,331,977
Employer (picked-up employee contributions)	341,769,694
Employee	296,386
Other	0
Total Contributions	<u>\$ 1,738,398,057</u>
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 841,228,583
Interest and Dividends	387,375,009
Other Income (interest, alternative's income, etc.)	407,409,029
Less Investment Expense	<u>(174,112,484)</u>
Net Investment Income	<u>\$ 1,461,900,137</u>
Other	<u>\$ 0</u>
Total Additions	<u>\$ 3,200,298,194</u>
Deductions	
Benefit payments, including refunds of employee contributions	\$ 1,907,050,135
Pension Plan Administrative Expense	18,000,678
Other	<u>0</u>
Total Deductions	<u>\$ 1,925,050,813</u>
Net Increase in Net Position	\$ 1,275,247,381
Net Position Restricted for Pensions	
Beginning of Year	<u>\$ 22,425,384,975</u>
End of Year	<u><u>\$ 23,700,632,356</u></u>



SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the Net Pension Liability and Related Ratios

Fiscal Year Ended June 30, 2024

A. Total pension liability

1. Service Cost	\$ 753,649,057
2. Interest on the Total Pension Liability	2,495,354,170
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	282,947,390
5. Changes of assumptions	0
6. Benefit payments, including refunds of employee contributions	(1,907,050,135)
7. Net change in total pension liability	\$ 1,624,900,482
8. Total pension liability – beginning	36,224,617,253
9. Total pension liability – ending	<u><u>\$ 37,849,517,735</u></u>

B. Plan fiduciary net position

1. Contributions – employer	\$ 1,396,331,977
2. Contributions – employer (picked-up employee contributions)	341,769,694
3. Contributions – employee	296,386
4. Net investment income	1,461,900,137
5. Benefit payments, including refunds of employee contributions	(1,907,050,135)
6. Pension Plan Administrative Expense	(18,000,678)
7. Other	0
8. Net change in plan fiduciary net position	\$ 1,275,247,381
9. Plan fiduciary net position – beginning	22,425,384,975
10. Plan fiduciary net position – ending	<u><u>\$ 23,700,632,356</u></u>

C. Net pension liability

\$ 14,148,885,379

D. Plan fiduciary net position as a percentage of the total pension liability

62.62%

E. Covered-employee payroll

\$ 4,948,188,592

F. Net pension liability as a percentage of covered employee payroll

285.94%



Schedules of Required Supplementary Information

Schedule of the Employers' Net Pension Liability

Last 10 Fiscal Years (which may be built prospectively)

FY Ending June 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2015	\$ 23,238,395,386	\$ 14,505,464,556	\$ 8,732,930,830	62.42%	\$ 3,995,447,345	218.57%
2016	27,439,233,629	14,069,978,917	13,369,254,712	51.28%	4,112,227,306	325.11%
2017	28,648,630,533	15,698,324,306	12,950,306,227	54.80%	4,243,521,876	305.18%
2018	29,917,401,383	16,598,407,973	13,318,993,410	55.48%	4,256,052,840	312.94%
2019	31,396,447,685	17,227,026,987	14,169,420,698	54.87%	4,376,216,753	323.78%
2020	32,691,755,844	17,385,480,476	15,306,275,368	53.18%	4,481,443,808	341.55%
2021	34,139,165,472	21,935,791,711	12,203,373,761	64.25%	4,667,346,006	261.46%
2022	34,822,778,620	21,854,814,032	12,967,964,588	62.76%	4,483,686,505	289.23%
2023	36,224,617,253	22,425,384,975	13,799,232,278	61.91%	4,674,478,467	295.20%
2024	37,849,517,735	23,700,632,356	14,148,885,379	62.62%	4,948,188,592	285.94%



Schedules of Required Supplementary Information

Schedule of Changes in the Employers' Net Pension Liability and Related Ratios

Last 10 Fiscal Years (which may be built prospectively)

Fiscal year ending June 30,

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Total Pension Liability										
Service Cost	\$ 753,649,057	\$ 665,262,225	\$ 613,550,345	\$ 642,140,242	\$ 643,407,238	\$ 619,504,278	\$ 584,470,193	\$ 576,724,568	\$ 484,278,499	\$ 437,901,029
Interest on the Total Pension Liability	2,495,354,170	2,397,116,921	2,349,503,644	2,252,271,074	2,165,389,424	2,063,885,936	1,976,275,120	1,894,622,190	1,748,619,873	1,693,252,684
Benefit Changes	0	0	0	0	0	0	0	0	0	0
Difference between Expected and Actual Experience	282,947,390	161,224,056	(361,275,093)	228,048,119	54,544,851	221,473,495	124,753,379	61,179,390	297,534,219	(192,816,757)
Assumption Changes	0	0	(154,960,000)	0	0	60,320,037	0	0	2,915,922,677	261,213,541
Benefit Payments	(1,878,501,292)	(1,795,410,787)	(1,738,751,492)	(1,651,431,372)	(1,545,589,761)	(1,469,634,809)	(1,395,881,342)	(1,306,788,954)	(1,232,589,353)	(1,170,744,770)
Refunds	(28,548,843)	(26,353,782)	(24,454,256)	(23,618,435)	(22,443,593)	(16,502,635)	(20,846,500)	(16,340,290)	(12,927,672)	(10,507,888)
Net Change in Total Pension Liability	1,624,900,482	1,401,838,633	683,613,148	1,447,409,628	1,295,308,159	1,479,046,302	1,268,770,850	1,209,396,904	4,200,838,243	1,018,297,839
Total Pension Liability - Beginning	36,224,617,253	34,822,778,620	34,139,165,472	32,691,755,844	31,396,447,685	29,917,401,383	28,648,630,533	27,439,233,629	23,238,395,386	22,220,097,547
Total Pension Liability - Ending (a)	\$37,849,517,735	\$36,224,617,253	\$34,822,778,620	\$34,139,165,472	\$32,691,755,844	\$31,396,447,685	\$29,917,401,383	\$28,648,630,533	\$27,439,233,629	\$23,238,395,386
Plan Fiduciary Net Position										
Employer Contributions	\$ 1,396,331,977	\$ 1,274,221,056	\$ 1,242,139,095	\$ 1,281,558,696	\$ 1,098,589,013	\$ 922,635,334	\$ 847,595,466	\$ 781,244,218	\$ 756,558,222	\$ 717,792,981
Employer Contributions (picked-up employee contributions)	341,769,694	309,509,309	292,422,087	299,473,128	284,142,994	270,764,670	257,294,033	249,211,751	235,079,968	221,909,859
Employee Contributions	296,386	251,744	605,473	1,153,318	3,255,037	2,458,908	2,133,901	1,492,316	1,721,893	1,595,560
Pension Plan Net Investment Income	1,461,900,137	826,902,875	164,559,035	4,662,225,761	358,282,664	932,696,412	1,225,572,599	1,934,512,507	(169,368,110)	556,436,475
Benefit Payments	(1,878,501,292)	(1,795,410,787)	(1,738,751,492)	(1,651,431,372)	(1,545,589,761)	(1,469,634,809)	(1,395,881,342)	(1,306,788,954)	(1,232,589,353)	(1,170,744,770)
Refunds	(28,548,843)	(26,353,782)	(24,454,256)	(23,618,435)	(22,443,593)	(16,502,635)	(20,846,500)	(16,340,290)	(12,927,672)	(10,507,888)
Pension Plan Administrative Expense	(18,000,678)	(18,549,472)	(17,497,621)	(19,049,861)	(17,782,865)	(13,798,866)	(15,784,490)	(14,986,159)	(13,960,587)	(14,032,964)
Other	0	0	0	0	0	0	0	0	0	0
Net Change in Plan Fiduciary Net Position	1,275,247,381	570,570,943	(80,977,679)	4,550,311,235	158,453,489	628,619,014	900,083,667	1,628,345,389	(435,485,639)	302,449,253
Plan Fiduciary Net Position - Beginning	22,425,384,975	21,854,814,032	21,935,791,711	17,385,480,476	17,227,026,987	16,598,407,973	15,698,324,306	14,069,978,917	14,505,464,556	14,203,015,303
Plan Fiduciary Net Position - Ending (b)	\$23,700,632,356	\$22,425,384,975	\$21,854,814,032	\$21,935,791,711	\$17,385,480,476	\$17,227,026,987	\$16,598,407,973	\$15,698,324,306	\$14,069,978,917	\$14,505,464,556
Net Pension Liability - Ending (a) - (b)	14,148,885,379	13,799,232,278	12,967,964,588	12,203,373,761	15,306,275,368	14,169,420,698	13,318,993,410	12,950,306,227	13,369,254,712	8,732,930,830
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	62.62 %	61.91 %	62.76 %	64.25 %	53.18 %	54.87 %	55.48 %	54.80 %	51.28 %	62.42 %
Covered Employee Payroll	\$ 4,948,188,592	\$ 4,674,478,467	\$ 4,483,686,505	\$ 4,667,346,006	\$ 4,481,443,808	\$ 4,376,216,753	\$ 4,256,052,840	\$ 4,243,521,876	\$ 4,112,227,306	\$ 3,995,447,345
Net Pension Liability as a Percentage of Covered Employee Payroll	285.94 %	295.20 %	289.23 %	261.46 %	341.55 %	323.78 %	312.94 %	305.18 %	325.11 %	218.57 %

Notes to Schedule:

N/A



SECTION D

NOTES TO FINANCIAL STATEMENTS

Single Discount Rate

A single discount rate of 7.00% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.00%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member 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.

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

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

1% Decrease	Current Single Discount Rate Assumption	1% Increase
6.00%	7.00%	8.00%
\$19,104,950,116	\$14,148,885,379	\$10,043,774,393

Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	55,820
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	37,403
Active Plan Members	65,337
Total Plan Members	158,560



SECTION E

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 tax-exempt municipal bond rate is required, as described in the following paragraph.

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

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 3.97% (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 7.00%.

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

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

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

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



Single Discount Rate Development

Projection of Contributions Beginning July 1, 2024

Year	Payroll for Current Employees		Payroll for Future Employees		Total Employee Payroll	Contributions from Current Employees		Contributions for Future Employees		Total Contributions	
1	4,893,261,573	\$	192,966,765	\$	5,086,228,338	\$	334,209,765	\$	1,265,145,492	\$	1,639,325,577
2	4,703,683,364	\$	530,554,219	\$	5,234,237,583	\$	328,317,099	\$	1,215,380,250	\$	1,653,509,501
3	4,553,071,451	\$	833,482,446	\$	5,386,553,896	\$	323,723,380	\$	1,175,548,460	\$	1,671,615,399
4	4,416,517,225	\$	1,126,785,389	\$	5,543,302,615	\$	319,314,195	\$	1,139,486,011	\$	1,691,585,981
5	4,289,388,076	\$	1,415,224,645	\$	5,704,612,721	\$	315,270,024	\$	1,106,039,418	\$	1,713,471,372
6	4,167,671,328	\$	1,702,945,623	\$	5,870,616,951	\$	310,908,281	\$	1,074,073,659	\$	1,736,304,389
7	4,050,210,450	\$	1,991,241,454	\$	6,041,451,904	\$	306,195,910	\$	1,043,267,223	\$	1,759,998,820
8	3,931,317,513	\$	2,285,940,641	\$	6,217,258,155	\$	301,532,053	\$	1,011,604,793	\$	1,783,827,558
9	3,808,030,789	\$	2,590,149,578	\$	6,398,180,367	\$	295,883,992	\$	979,880,711	\$	1,809,094,103
10	3,682,246,674	\$	2,902,120,742	\$	6,584,367,416	\$	289,792,813	\$	947,514,000	\$	1,834,873,195
11	3,557,984,883	\$	3,217,987,624	\$	6,775,972,507	\$	283,215,597	\$	915,539,014	\$	1,861,360,131
12	3,432,698,644	\$	3,540,454,664	\$	6,973,153,307	\$	276,332,241	\$	883,300,418	\$	1,888,636,334
13	3,306,819,226	\$	3,869,252,842	\$	7,176,072,069	\$	268,844,403	\$	850,909,184	\$	1,916,459,041
14	3,180,952,406	\$	4,203,943,360	\$	7,384,895,766	\$	261,156,193	\$	818,521,193	\$	1,945,297,892
15	3,055,991,557	\$	4,543,804,676	\$	7,599,796,233	\$	253,036,101	\$	786,366,325	\$	1,975,002,687
16	2,931,849,902	\$	4,889,100,401	\$	7,820,950,303	\$	244,809,467	\$	754,422,252	\$	2,005,930,716
17	2,808,889,515	\$	5,239,650,442	\$	8,048,539,957	\$	236,227,608	\$	722,782,143	\$	2,037,889,384
18	2,684,033,684	\$	5,598,718,786	\$	8,282,752,470	\$	227,069,250	\$	690,654,298	\$	2,070,537,793
19	2,557,005,014	\$	5,966,775,553	\$	8,523,780,566	\$	217,601,127	\$	657,967,340	\$	2,104,168,101
20	2,428,225,556	\$	6,343,597,024	\$	8,771,822,581	\$	207,613,285	\$	624,829,870	\$	2,138,632,891
21	2,296,236,418	\$	6,730,846,200	\$	9,027,082,618	\$	197,246,708	\$	590,866,486	\$	2,174,040,167
22	2,162,488,476	\$	7,127,282,246	\$	9,289,770,722	\$	186,406,507	\$	556,450,528	\$	2,210,412,884
23	2,028,026,232	\$	7,532,076,818	\$	9,560,103,050	\$	175,221,466	\$	521,850,766	\$	2,247,978,034
24	1,893,556,227	\$	7,944,745,822	\$	9,838,302,049	\$	163,981,969	\$	487,249,007	\$	2,287,108,130
25	1,756,953,977	\$	8,367,642,661	\$	10,124,596,639	\$	152,503,605	\$	452,098,580	\$	2,327,556,672
26	1,618,977,546	\$	8,800,244,855	\$	10,419,222,401	\$	140,851,046	\$	416,594,549	\$	2,369,475,814
27	1,480,339,981	\$	9,242,081,792	\$	10,722,421,773	\$	128,937,612	\$	380,920,395	\$	2,412,865,454
28	1,341,456,778	\$	9,692,987,468	\$	11,034,444,246	\$	116,975,031	\$	345,183,034	\$	2,458,010,055
29	1,203,447,336	\$	10,152,099,237	\$	11,355,546,574	\$	105,060,952	\$	309,670,509	\$	2,505,117,684
30	1,067,034,545	\$	10,618,958,434	\$	11,685,992,979	\$	93,152,116	\$	274,568,833	\$	2,554,236,653
31	936,370,172	\$	11,089,685,203	\$	12,026,055,375	\$	81,838,753	\$	240,946,337	\$	2,606,226,635
32	814,438,190	\$	11,561,575,396	\$	12,376,013,586	\$	71,181,898	\$	209,570,856	\$	2,661,359,696
33	701,332,348	\$	12,034,823,234	\$	12,736,155,581	\$	61,366,580	\$	180,466,513	\$	2,719,884,981
34	598,886,094	\$	12,507,891,615	\$	13,106,777,709	\$	52,402,533	\$	154,105,091	\$	2,781,967,507
35	505,636,146	\$	12,982,548,794	\$	13,488,184,940	\$	44,243,163	\$	130,110,058	\$	2,847,548,242
36	422,426,725	\$	13,458,264,397	\$	13,880,691,122	\$	36,962,338	\$	108,698,648	\$	2,916,809,083
37	348,474,303	\$	13,936,144,931	\$	14,284,619,234	\$	30,491,501	\$	89,669,245	\$	2,989,707,692
38	283,930,783	\$	14,416,370,870	\$	14,700,301,653	\$	24,872,337	\$	73,060,937	\$	3,066,362,005
39	229,039,834	\$	14,899,040,597	\$	15,128,080,431	\$	20,063,889	\$	58,936,424	\$	3,146,814,020
40	183,059,732	\$	15,385,247,840	\$	15,568,307,572	\$	16,036,033	\$	47,104,845	\$	3,231,067,961
41	145,351,741	\$	15,875,993,581	\$	16,021,345,322	\$	12,732,813	\$	37,401,842	\$	3,319,109,621
42	114,037,689	\$	16,373,528,783	\$	16,487,566,471	\$	10,001,105	\$	29,344,125	\$	3,410,766,075
43	88,731,256	\$	16,878,623,400	\$	16,967,354,656	\$	7,781,731	\$	22,832,285	\$	3,506,037,275
44	68,701,113	\$	17,392,403,563	\$	17,461,104,676	\$	6,025,088	\$	17,678,138	\$	3,604,917,312
45	52,406,187	\$	17,916,816,635	\$	17,969,222,822	\$	4,596,023	\$	13,485,136	\$	3,707,275,460
46	39,488,179	\$	18,452,639,027	\$	18,492,127,206	\$	3,467,062	\$	10,161,080	\$	3,813,151,915
47	29,090,994	\$	19,001,157,114	\$	19,030,248,108	\$	2,554,189	\$	7,485,681	\$	3,922,507,245
48	20,975,112	\$	19,563,053,216	\$	19,584,028,328	\$	1,843,712	\$	5,397,306	\$	4,035,406,618
49	14,522,650	\$	20,139,400,902	\$	20,153,923,552	\$	1,276,541	\$	3,736,962	\$	4,151,853,009
50	9,527,015	\$	20,730,875,712	\$	20,740,402,728	\$	837,425	\$	2,451,487	\$	4,271,917,101



Single Discount Rate Development

Projection of Contributions Beginning July 1, 2024

(Continued)

Year	Payroll for Current		Total Employee	Contributions from		Employer	
	Employees	Employees		Current	Current	Employer	Total
			Payroll	Employees	Employees	Contributions for	Contributions
						Future Employees	
51	5,935,885	\$ 21,338,012,562	21,343,948,447	522,358	1,527,419	4,393,641,792	4,395,691,569
52	3,290,590	\$ 21,961,766,757	21,965,057,347	289,572	846,733	4,522,077,019	4,523,213,324
53	1,597,428	\$ 22,602,643,087	22,604,240,516	140,733	411,050	4,654,037,811	4,654,589,594
54	806,866	\$ 23,261,217,049	23,262,023,915	71,085	207,622	4,789,642,665	4,789,921,372
55	343,452	\$ 23,938,605,358	23,938,948,810	30,258	88,377	4,929,121,521	4,929,240,156
56	95,740	\$ 24,635,476,481	24,635,572,221	8,444	24,636	5,072,612,021	5,072,645,101
57	8,303	\$ 25,352,459,069	25,352,467,372	732	2,137	5,220,243,608	5,220,246,477
58	-	\$ 26,090,224,173	26,090,224,173	-	-	5,372,154,457	5,372,154,457
59	-	\$ 26,849,449,696	26,849,449,696	-	-	5,528,484,152	5,528,484,152
60	-	\$ 27,630,768,683	27,630,768,683	-	-	5,689,363,040	5,689,363,040
61	-	\$ 28,434,824,051	28,434,824,051	-	-	5,854,923,505	5,854,923,505
62	-	\$ 29,262,277,431	29,262,277,431	-	-	6,025,301,779	6,025,301,779
63	-	\$ 30,113,809,704	30,113,809,704	-	-	6,200,638,061	6,200,638,061
64	-	\$ 30,990,121,567	30,990,121,567	-	-	6,381,076,628	6,381,076,628
65	-	\$ 31,891,934,104	31,891,934,104	-	-	6,566,765,958	6,566,765,958
66	-	\$ 32,819,989,387	32,819,989,387	-	-	6,757,858,847	6,757,858,847
67	-	\$ 33,775,051,078	33,775,051,078	-	-	6,954,512,540	6,954,512,540
68	-	\$ 34,757,905,064	34,757,905,064	-	-	7,156,888,855	7,156,888,855
69	-	\$ 35,769,360,102	35,769,360,102	-	-	7,365,154,320	7,365,154,320
70	-	\$ 36,810,248,481	36,810,248,481	-	-	7,579,480,311	7,579,480,311
71	-	\$ 37,881,426,711	37,881,426,711	-	-	7,800,043,188	7,800,043,188
72	-	\$ 38,983,776,229	38,983,776,229	-	-	8,027,024,445	8,027,024,445
73	-	\$ 40,118,204,117	40,118,204,117	-	-	8,260,610,856	8,260,610,856
74	-	\$ 41,285,643,857	41,285,643,857	-	-	8,500,994,632	8,500,994,632
75	-	\$ 42,487,056,093	42,487,056,093	-	-	8,748,373,576	8,748,373,576
76	-	\$ 43,723,429,425	43,723,429,425	-	-	9,002,951,247	9,002,951,247
77	-	\$ 44,995,781,222	44,995,781,222	-	-	9,264,937,128	9,264,937,128
78	-	\$ 46,305,158,455	46,305,158,455	-	-	9,534,546,799	9,534,546,799
79	-	\$ 47,652,638,566	47,652,638,566	-	-	9,812,002,111	9,812,002,111
80	-	\$ 49,039,330,348	49,039,330,348	-	-	10,097,531,372	10,097,531,372
81	-	\$ 50,466,374,862	50,466,374,862	-	-	10,391,369,535	10,391,369,535
82	-	\$ 51,934,946,370	51,934,946,370	-	-	10,693,758,389	10,693,758,389
83	-	\$ 53,446,253,309	53,446,253,309	-	-	11,004,946,758	11,004,946,758
84	-	\$ 55,001,539,281	55,001,539,281	-	-	11,325,190,708	11,325,190,708
85	-	\$ 56,602,084,074	56,602,084,074	-	-	11,654,753,758	11,654,753,758
86	-	\$ 58,249,204,720	58,249,204,720	-	-	11,993,907,092	11,993,907,092
87	-	\$ 59,944,256,578	59,944,256,578	-	-	12,342,929,789	12,342,929,789
88	-	\$ 61,688,634,444	61,688,634,444	-	-	12,702,109,045	12,702,109,045
89	-	\$ 63,483,773,706	63,483,773,706	-	-	13,071,740,419	13,071,740,419
90	-	\$ 65,331,151,521	65,331,151,521	-	-	13,452,128,065	13,452,128,065
91	-	\$ 67,232,288,031	67,232,288,031	-	-	13,843,584,992	13,843,584,992
92	-	\$ 69,188,747,612	69,188,747,612	-	-	14,246,433,315	14,246,433,315
93	-	\$ 71,202,140,168	71,202,140,168	-	-	14,661,004,524	14,661,004,524
94	-	\$ 73,274,122,447	73,274,122,447	-	-	15,087,639,756	15,087,639,756
95	-	\$ 75,406,399,410	75,406,399,410	-	-	15,526,690,073	15,526,690,073
96	-	\$ 77,600,725,633	77,600,725,633	-	-	15,978,516,754	15,978,516,754
97	-	\$ 79,858,906,749	79,858,906,749	-	-	16,443,491,591	16,443,491,591
98	-	\$ 82,182,800,935	82,182,800,935	-	-	16,921,997,197	16,921,997,197
99	-	\$ 84,574,320,442	84,574,320,442	-	-	17,414,427,315	17,414,427,315
100	-	\$ 87,035,433,167	87,035,433,167	-	-	17,919,486,945	17,919,486,945



Single Discount Rate Development

Projection of Plan Fiduciary Net Position Beginning July 1, 2024

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 23,700,632,356	\$ 1,639,325,577	\$ 2,011,860,335	\$ 18,524,498	\$ 1,645,588,681	\$ 24,955,161,781
2	24,955,161,781	1,653,509,501	\$ 2,120,663,590	17,349,190	1,730,190,515	\$ 26,200,849,017
3	26,200,849,017	1,671,615,399	\$ 2,222,392,041	16,496,153	1,814,540,684	\$ 27,448,116,906
4	27,448,116,906	1,691,585,981	\$ 2,324,903,619	15,763,565	1,899,034,569	\$ 28,698,070,273
5	28,698,070,273	1,713,471,372	\$ 2,425,159,684	15,115,847	1,983,857,010	\$ 29,955,123,124
6	29,955,123,124	1,736,304,389	\$ 2,526,103,082	14,531,710	2,069,183,183	\$ 31,219,975,904
7	31,219,975,904	1,759,998,820	\$ 2,628,307,987	13,981,114	2,155,040,431	\$ 32,492,726,054
8	32,492,726,054	1,783,827,558	\$ 2,731,211,290	13,461,355	2,241,430,024	\$ 33,773,310,992
9	33,773,310,992	1,809,094,103	\$ 2,835,243,126	12,950,766	2,328,378,379	\$ 35,062,589,582
10	35,062,589,582	1,834,873,195	\$ 2,938,972,602	12,438,753	2,415,963,377	\$ 36,362,014,800
11	36,362,014,800	1,861,360,131	\$ 3,041,853,758	11,939,947	2,504,311,730	\$ 37,673,892,955
12	37,673,892,955	1,888,636,334	\$ 3,144,685,692	11,460,234	2,593,559,982	\$ 38,999,943,345
13	38,999,943,345	1,916,459,041	\$ 3,245,930,302	10,985,712	2,683,873,533	\$ 40,343,359,905
14	40,343,359,905	1,945,297,892	\$ 3,344,574,957	10,523,485	2,775,526,715	\$ 41,709,086,069
15	41,709,086,069	1,975,002,687	\$ 3,440,670,539	10,066,489	2,868,858,894	\$ 43,102,210,621
16	43,102,210,621	2,005,930,716	\$ 3,532,870,084	9,617,368	2,964,284,833	\$ 44,529,938,718
17	44,529,938,718	2,037,889,384	\$ 3,620,381,281	9,174,922	3,062,329,570	\$ 46,000,601,470
18	46,000,601,470	2,070,537,793	\$ 3,705,195,066	8,742,425	3,163,495,935	\$ 47,520,697,706
19	47,520,697,706	2,104,168,101	\$ 3,786,830,173	8,305,697	3,268,265,947	\$ 49,097,995,884
20	49,097,995,884	2,138,632,891	\$ 3,863,576,214	7,869,526	3,377,237,012	\$ 50,742,420,048
21	50,742,420,048	2,174,040,167	\$ 3,936,716,017	7,433,429	3,491,063,407	\$ 52,463,374,176
22	52,463,374,176	2,210,412,884	\$ 4,005,550,084	6,992,382	3,610,428,440	\$ 54,271,673,034
23	54,271,673,034	2,247,978,034	\$ 4,068,538,076	6,555,935	3,736,149,627	\$ 56,180,706,685
24	56,180,706,685	2,287,108,130	\$ 4,125,497,737	6,123,670	3,869,183,375	\$ 58,205,376,784
25	58,205,376,784	2,327,556,672	\$ 4,176,623,994	5,695,351	4,010,557,621	\$ 60,361,171,732
26	60,361,171,732	2,369,475,814	\$ 4,223,007,393	5,262,117	4,161,324,567	\$ 62,663,702,604
27	62,663,702,604	2,412,865,454	\$ 4,263,511,068	4,833,563	4,322,615,775	\$ 65,130,839,203
28	65,130,839,203	2,458,010,055	\$ 4,298,394,905	4,405,751	4,495,683,109	\$ 67,781,731,711
29	67,781,731,711	2,505,117,684	\$ 4,326,850,823	3,976,870	4,681,902,111	\$ 70,637,923,813
30	70,637,923,813	2,554,236,653	\$ 4,348,406,254	3,553,206	4,882,798,543	\$ 73,722,999,549
31	73,722,999,549	2,606,226,635	\$ 4,360,814,237	3,137,001	5,100,130,104	\$ 77,065,405,050
32	77,065,405,050	2,661,359,696	\$ 4,361,980,091	2,750,531	5,335,968,693	\$ 80,698,002,817
33	80,698,002,817	2,719,884,981	\$ 4,351,606,341	2,388,602	5,592,633,671	\$ 84,656,526,527
34	84,656,526,527	2,781,967,507	\$ 4,328,774,089	2,054,639	5,872,663,573	\$ 88,980,328,879
35	88,980,328,879	2,847,548,242	\$ 4,294,118,945	1,751,693	6,178,789,082	\$ 93,710,795,564
36	93,710,795,564	2,916,809,083	\$ 4,247,490,493	1,474,516	6,513,918,811	\$ 98,892,558,450
37	98,892,558,450	2,989,707,692	\$ 4,189,421,125	1,228,394	6,881,157,033	\$ 104,572,773,657
38	104,572,773,657	3,066,362,005	\$ 4,119,931,162	1,007,959	7,283,808,221	\$ 110,802,004,761
39	110,802,004,761	3,146,814,020	\$ 4,039,286,230	816,835	7,725,404,005	\$ 117,634,119,722
40	117,634,119,722	3,231,067,961	\$ 3,947,858,997	655,679	8,209,702,443	\$ 125,126,375,450
41	125,126,375,450	3,319,109,621	\$ 3,846,616,435	520,628	8,740,677,890	\$ 133,339,025,898
42	133,339,025,898	3,410,766,075	\$ 3,736,958,550	411,582	9,322,494,006	\$ 142,334,915,848
43	142,334,915,848	3,506,037,275	\$ 3,619,486,478	320,570	9,959,529,514	\$ 152,180,675,589
44	152,180,675,589	3,604,917,312	\$ 3,495,143,581	248,511	10,656,415,840	\$ 162,946,616,648
45	162,946,616,648	3,707,275,460	\$ 3,365,374,923	191,184	11,418,020,716	\$ 174,706,346,717
46	174,706,346,717	3,813,151,915	\$ 3,230,896,131	144,193	12,249,473,591	\$ 187,537,931,899
47	187,537,931,899	3,922,507,245	\$ 3,092,677,403	107,709	13,156,204,348	\$ 201,523,858,380
48	201,523,858,380	4,035,406,618	\$ 2,951,336,063	78,556	14,143,968,130	\$ 216,751,818,510
49	216,751,818,510	4,151,853,009	\$ 2,807,820,978	55,836	15,218,870,887	\$ 233,314,665,592
50	233,314,665,592	4,271,917,101	\$ 2,662,582,906	37,953	16,387,399,326	\$ 251,311,361,159



Single Discount Rate Development

Projection of Plan Fiduciary Net Position Beginning July 1, 2024 (Continued)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
51	251,311,361,159	4,395,691,569	\$ 2,516,278,716	24,325	17,656,461,363	\$ 270,847,211,051
52	270,847,211,051	4,523,213,324	\$ 2,369,760,094	14,709	19,033,400,379	\$ 292,034,049,951
53	292,034,049,951	4,654,589,594	\$ 2,223,526,955	7,457	20,526,031,349	\$ 314,991,136,482
54	314,991,136,482	4,789,921,372	\$ 2,078,188,846	3,454	22,142,684,845	\$ 339,845,550,399
55	339,845,550,399	4,929,240,156	\$ 1,934,820,723	1,680	23,892,220,584	\$ 366,732,188,736
56	366,732,188,736	5,072,645,101	\$ 1,794,076,226	514	25,784,062,334	\$ 395,794,819,432
57	395,794,819,432	5,220,246,477	\$ 1,656,573,009	75	27,828,256,389	\$ 427,186,749,215
58	427,186,749,215	5,372,154,457	\$ 1,522,930,935	-	30,035,516,695	\$ 461,071,489,432
59	461,071,489,432	5,528,484,152	\$ 1,393,702,096	-	32,417,274,020	\$ 497,623,545,508
60	497,623,545,508	5,689,363,040	\$ 1,269,346,952	-	34,985,732,290	\$ 537,029,293,887
61	537,029,293,887	5,854,923,505	\$ 1,150,266,743	-	37,753,928,606	\$ 579,487,879,254
62	579,487,879,254	6,025,301,779	\$ 1,036,806,036	-	40,735,795,925	\$ 625,212,170,922
63	625,212,170,922	6,200,638,061	\$ 929,253,809	-	43,946,229,982	\$ 674,429,785,157
64	674,429,785,157	6,381,076,628	\$ 827,848,159	-	47,401,160,686	\$ 727,384,174,312
65	727,384,174,312	6,566,765,958	\$ 732,768,946	-	51,117,628,624	\$ 784,335,799,948
66	784,335,799,948	6,757,858,847	\$ 644,141,499	-	55,113,867,047	\$ 845,563,384,344
67	845,563,384,344	6,954,512,540	\$ 562,047,339	-	59,409,389,123	\$ 911,365,238,668
68	911,365,238,668	7,156,888,855	\$ 486,528,004	-	64,025,080,772	\$ 982,060,680,290
69	982,060,680,290	7,365,154,320	\$ 417,586,279	-	68,983,299,842	\$ 1,057,991,548,173
70	1,057,991,548,173	7,579,480,311	\$ 355,185,650	-	74,307,982,215	\$ 1,139,523,825,049
71	1,139,523,825,049	7,800,043,188	\$ 299,248,128	-	80,024,755,434	\$ 1,227,049,375,543
72	1,227,049,375,543	8,027,024,445	\$ 249,643,655	-	86,161,060,743	\$ 1,320,987,817,076
73	1,320,987,817,076	8,260,610,856	\$ 206,169,989	-	92,746,284,745	\$ 1,421,788,542,688
74	1,421,788,542,688	8,500,994,632	\$ 168,543,759	-	99,811,901,318	\$ 1,529,932,894,880
75	1,529,932,894,880	8,748,373,576	\$ 136,393,200	-	107,391,624,035	\$ 1,645,936,499,291
76	1,645,936,499,291	9,002,951,247	\$ 109,261,788	-	115,521,569,402	\$ 1,770,351,758,152
77	1,770,351,758,152	9,264,937,128	\$ 86,641,077	-	124,240,430,278	\$ 1,903,770,484,481
78	1,903,770,484,481	9,534,546,799	\$ 67,997,867	-	133,589,659,339	\$ 2,046,826,692,752
79	2,046,826,692,752	9,812,002,111	\$ 52,804,924	-	143,613,663,372	\$ 2,200,199,553,311
80	2,200,199,553,311	10,097,531,372	\$ 40,559,687	-	154,360,009,449	\$ 2,364,616,534,445
81	2,364,616,534,445	10,391,369,535	\$ 30,803,344	-	165,879,644,221	\$ 2,540,856,744,857
82	2,540,856,744,857	10,693,758,389	\$ 23,126,376	-	178,227,127,708	\$ 2,729,754,504,579
83	2,729,754,504,579	11,004,946,758	\$ 17,164,909	-	191,460,883,394	\$ 2,932,203,169,821
84	2,932,203,169,821	11,325,190,708	\$ 12,600,076	-	205,643,465,996	\$ 3,149,159,226,448
85	3,149,159,226,448	11,654,753,758	\$ 9,154,253	-	220,841,848,143	\$ 3,381,646,674,097
86	3,381,646,674,097	11,993,907,092	\$ 6,588,737	-	237,127,727,356	\$ 3,630,761,719,807
87	3,630,761,719,807	12,342,929,789	\$ 4,701,418	-	254,577,854,682	\$ 3,897,677,802,860
88	3,897,677,802,860	12,702,109,045	\$ 3,330,756	-	273,274,386,313	\$ 4,183,650,967,462
89	4,183,650,967,462	13,071,740,419	\$ 2,345,509	-	293,305,260,028	\$ 4,490,025,622,400
90	4,490,025,622,400	13,452,128,065	\$ 1,643,161	-	314,764,598,435	\$ 4,818,240,705,738
91	4,818,240,705,738	13,843,584,992	\$ 1,146,871	-	337,753,140,612	\$ 5,169,836,284,470
92	5,169,836,284,470	14,246,433,315	\$ 800,132	-	362,378,704,276	\$ 5,546,460,621,929
93	5,546,460,621,929	14,661,004,524	\$ 558,239	-	388,756,680,805	\$ 5,949,877,749,020
94	5,949,877,749,020	15,087,639,756	\$ 391,651	-	417,010,565,117	\$ 6,381,975,562,242
95	6,381,975,562,242	15,526,690,073	\$ 275,858	-	447,272,522,889	\$ 6,844,774,499,347
96	6,844,774,499,347	15,978,516,754	\$ 195,661	-	479,683,997,718	\$ 7,340,436,818,157
97	7,340,436,818,157	16,443,491,591	\$ 139,439	-	514,396,360,844	\$ 7,871,276,531,153
98	7,871,276,531,153	16,921,997,197	\$ 100,628	-	551,571,606,530	\$ 8,439,770,034,252
99	8,439,770,034,252	17,414,427,315	\$ 73,747	-	591,383,096,229	\$ 9,048,567,484,049
100	9,048,567,484,049	17,919,486,945	\$ 54,382	-	634,016,296,495	\$ 9,700,503,213,107



Single Discount Rate Development

Present Values of Projected Benefit Payments Beginning July 1, 2024

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v [^] ((a)-.5)	(g)=(e)*vf [^] ((a)-.5)	(h)=(c)/(1+sdr) [^] ((a)-.5)
1	\$ 23,700,632,356	\$ 2,011,860,335	\$ 2,011,860,335	\$ -	\$ 1,944,938,797	\$ -	\$ 1,944,938,797
2	24,955,161,781	2,120,663,590	2,120,663,590	-	1,916,002,686	-	1,916,002,686
3	26,200,849,017	2,222,392,041	2,222,392,041	-	1,876,554,703	-	1,876,554,703
4	27,448,116,906	2,324,903,619	2,324,903,619	-	1,834,685,935	-	1,834,685,935
5	28,698,070,273	2,425,159,684	2,425,159,684	-	1,788,600,469	-	1,788,600,469
6	29,955,123,124	2,526,103,082	2,526,103,082	-	1,741,166,455	-	1,741,166,455
7	31,219,975,904	2,628,307,987	2,628,307,987	-	1,693,096,453	-	1,693,096,453
8	32,492,726,054	2,731,211,290	2,731,211,290	-	1,644,284,513	-	1,644,284,513
9	33,773,310,992	2,835,243,126	2,835,243,126	-	1,595,247,953	-	1,595,247,953
10	35,062,589,582	2,938,972,602	2,938,972,602	-	1,545,431,107	-	1,545,431,107
11	36,362,014,800	3,041,853,758	3,041,853,758	-	1,494,888,033	-	1,494,888,033
12	37,673,892,955	3,144,685,692	3,144,685,692	-	1,444,321,251	-	1,444,321,251
13	38,999,943,345	3,245,930,302	3,245,930,302	-	1,393,291,441	-	1,393,291,441
14	40,343,359,905	3,344,574,957	3,344,574,957	-	1,341,713,949	-	1,341,713,949
15	41,709,086,069	3,440,670,539	3,440,670,539	-	1,289,966,145	-	1,289,966,145
16	43,102,210,621	3,532,870,084	3,532,870,084	-	1,237,881,616	-	1,237,881,616
17	44,529,938,718	3,620,381,281	3,620,381,281	-	1,185,555,744	-	1,185,555,744
18	46,000,601,470	3,705,195,066	3,705,195,066	-	1,133,952,773	-	1,133,952,773
19	47,520,697,706	3,786,830,173	3,786,830,173	-	1,083,118,420	-	1,083,118,420
20	49,097,995,884	3,863,576,214	3,863,576,214	-	1,032,775,243	-	1,032,775,243
21	50,742,420,048	3,936,716,017	3,936,716,017	-	983,482,518	-	983,482,518
22	52,463,374,176	4,005,550,084	4,005,550,084	-	935,213,885	-	935,213,885
23	54,271,673,034	4,068,538,076	4,068,538,076	-	887,775,973	-	887,775,973
24	56,180,706,685	4,125,497,737	4,125,497,737	-	841,312,957	-	841,312,957
25	58,205,376,784	4,176,623,994	4,176,623,994	-	796,017,885	-	796,017,885
26	60,361,171,732	4,223,007,393	4,223,007,393	-	752,203,779	-	752,203,779
27	62,663,702,604	4,263,511,068	4,263,511,068	-	709,736,738	-	709,736,738
28	65,130,839,203	4,298,394,905	4,298,394,905	-	668,732,494	-	668,732,494
29	67,781,731,711	4,326,850,823	4,326,850,823	-	629,121,110	-	629,121,110
30	70,637,923,813	4,348,406,254	4,348,406,254	-	590,892,762	-	590,892,762
31	73,722,999,549	4,360,814,237	4,360,814,237	-	553,812,007	-	553,812,007
32	77,065,405,050	4,361,980,091	4,361,980,091	-	517,719,689	-	517,719,689
33	80,698,002,817	4,351,606,341	4,351,606,341	-	482,699,475	-	482,699,475
34	84,656,526,527	4,328,774,089	4,328,774,089	-	448,754,037	-	448,754,037
35	88,980,328,879	4,294,118,945	4,294,118,945	-	416,038,709	-	416,038,709
36	93,710,795,564	4,247,490,493	4,247,490,493	-	384,599,139	-	384,599,139
37	98,892,558,450	4,189,421,125	4,189,421,125	-	354,524,402	-	354,524,402
38	104,572,773,657	4,119,931,162	4,119,931,162	-	325,835,423	-	325,835,423
39	110,802,004,761	4,039,286,230	4,039,286,230	-	298,558,327	-	298,558,327
40	117,634,119,722	3,947,858,997	3,947,858,997	-	272,710,848	-	272,710,848
41	125,126,375,450	3,846,616,435	3,846,616,435	-	248,333,830	-	248,333,830
42	133,339,025,898	3,736,958,550	3,736,958,550	-	225,471,423	-	225,471,423
43	142,334,915,848	3,619,486,478	3,619,486,478	-	204,096,899	-	204,096,899
44	152,180,675,589	3,495,143,581	3,495,143,581	-	184,191,970	-	184,191,970
45	162,946,616,648	3,365,374,923	3,365,374,923	-	165,750,691	-	165,750,691
46	174,706,346,717	3,230,896,131	3,230,896,131	-	148,717,170	-	148,717,170
47	187,537,931,899	3,092,677,403	3,092,677,403	-	133,042,059	-	133,042,059
48	201,523,858,380	2,951,336,063	2,951,336,063	-	118,655,869	-	118,655,869
49	216,751,818,510	2,807,820,978	2,807,820,978	-	105,500,908	-	105,500,908
50	233,314,665,592	2,662,582,906	2,662,582,906	-	93,498,823	-	93,498,823

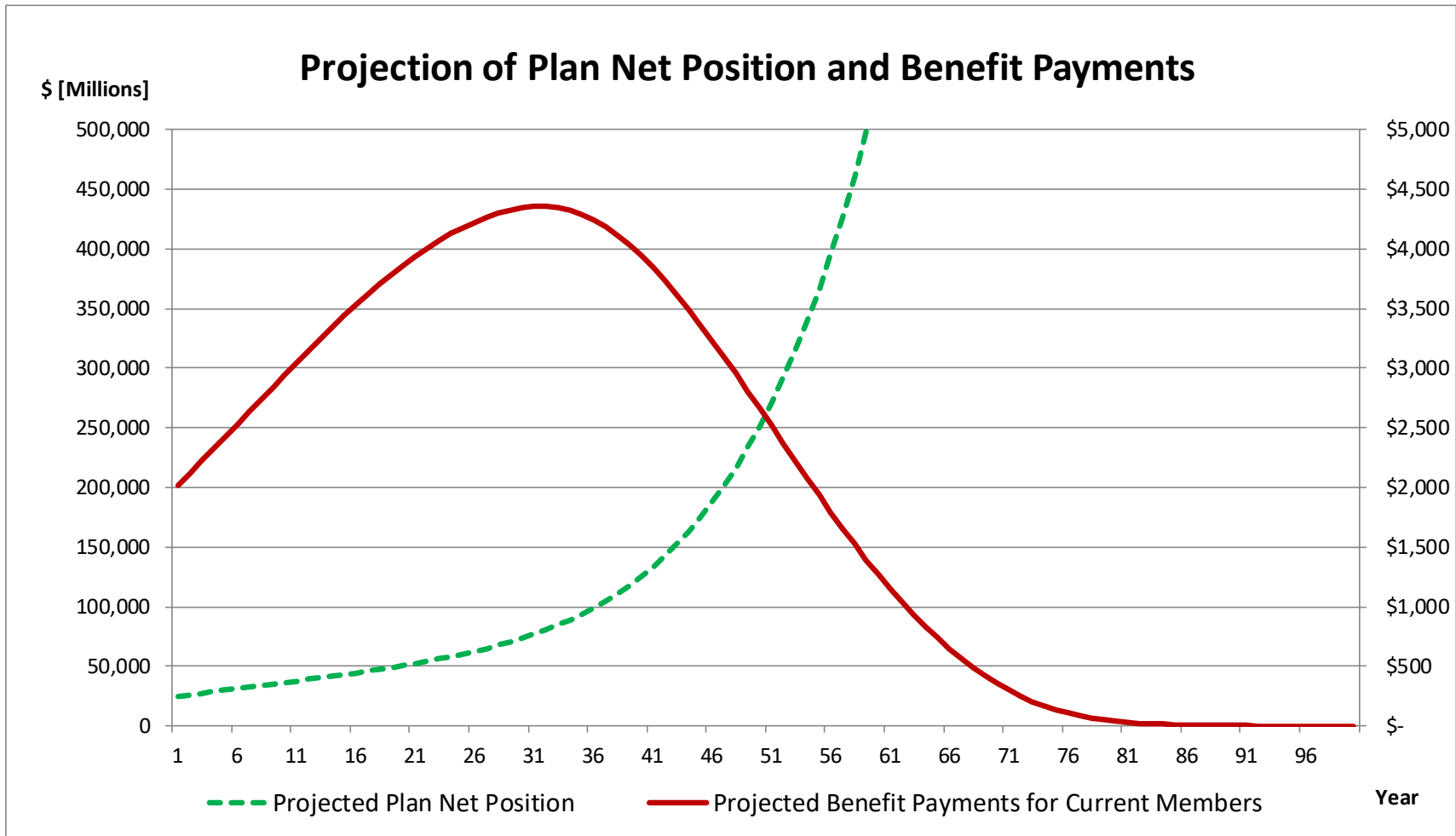


Single Discount Rate Development

PVs of Projected Benefit Payments Beginning July 1, 2024 (continued)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=(f)/((1+sdr) ^a (a-.5))
51	\$ 251,311,361,159	\$ 2,516,278,716	\$ 2,516,278,716	\$ -	\$ 82,580,588	\$ -	\$ 82,580,588
52	270,847,211,051	2,369,760,094	2,369,760,094	-	72,684,169	-	72,684,169
53	292,034,049,951	2,223,526,955	2,223,526,955	-	63,737,360	-	63,737,360
54	314,991,136,482	2,078,188,846	2,078,188,846	-	55,674,061	-	55,674,061
55	339,845,550,399	1,934,820,723	1,934,820,723	-	48,442,310	-	48,442,310
56	366,732,188,736	1,794,076,226	1,794,076,226	-	41,979,884	-	41,979,884
57	395,794,819,432	1,656,573,009	1,656,573,009	-	36,226,564	-	36,226,564
58	427,186,749,215	1,522,930,935	1,522,930,935	-	31,125,260	-	31,125,260
59	461,071,489,432	1,393,702,096	1,393,702,096	-	26,620,669	-	26,620,669
60	497,623,545,508	1,269,346,952	1,269,346,952	-	22,659,252	-	22,659,252
61	537,029,293,887	1,150,266,743	1,150,266,743	-	19,190,223	-	19,190,223
62	579,487,879,254	1,036,806,036	1,036,806,036	-	16,165,725	-	16,165,725
63	625,212,170,922	929,253,809	929,253,809	-	13,540,922	-	13,540,922
64	674,429,785,157	827,848,159	827,848,159	-	11,274,072	-	11,274,072
65	727,384,174,312	732,768,946	732,768,946	-	9,326,386	-	9,326,386
66	784,335,799,948	644,141,499	644,141,499	-	7,662,030	-	7,662,030
67	845,563,384,344	562,047,339	562,047,339	-	6,248,153	-	6,248,153
68	911,365,238,668	486,528,004	486,528,004	-	5,054,787	-	5,054,787
69	982,060,680,290	417,586,279	417,586,279	-	4,054,688	-	4,054,688
70	1,057,991,548,173	355,185,650	355,185,650	-	3,223,167	-	3,223,167
71	1,139,523,825,049	299,248,128	299,248,128	-	2,537,904	-	2,537,904
72	1,227,049,375,543	249,643,655	249,643,655	-	1,978,702	-	1,978,702
73	1,320,987,817,076	206,169,989	206,169,989	-	1,527,220	-	1,527,220
74	1,421,788,542,688	168,543,759	168,543,759	-	1,166,823	-	1,166,823
75	1,529,932,894,880	136,393,200	136,393,200	-	882,473	-	882,473
76	1,645,936,499,291	109,261,788	109,261,788	-	660,683	-	660,683
77	1,770,351,758,152	86,641,077	86,641,077	-	489,626	-	489,626
78	1,903,770,484,481	67,997,867	67,997,867	-	359,131	-	359,131
79	2,046,826,692,752	52,804,924	52,804,924	-	260,644	-	260,644
80	2,200,199,553,311	40,559,687	40,559,687	-	187,105	-	187,105
81	2,364,616,534,445	30,803,344	30,803,344	-	132,802	-	132,802
82	2,540,856,744,857	23,126,376	23,126,376	-	93,182	-	93,182
83	2,729,754,504,579	17,164,909	17,164,909	-	64,637	-	64,637
84	2,932,203,169,821	12,600,076	12,600,076	-	44,343	-	44,343
85	3,149,159,226,448	9,154,253	9,154,253	-	30,109	-	30,109
86	3,381,646,674,097	6,588,737	6,588,737	-	20,253	-	20,253
87	3,630,761,719,807	4,701,418	4,701,418	-	13,506	-	13,506
88	3,897,677,802,860	3,330,756	3,330,756	-	8,943	-	8,943
89	4,183,650,967,462	2,345,509	2,345,509	-	5,885	-	5,885
90	4,490,025,622,400	1,643,161	1,643,161	-	3,853	-	3,853
91	4,818,240,705,738	1,146,871	1,146,871	-	2,514	-	2,514
92	5,169,836,284,470	800,132	800,132	-	1,639	-	1,639
93	5,546,460,621,929	558,239	558,239	-	1,069	-	1,069
94	5,949,877,749,020	391,651	391,651	-	701	-	701
95	6,381,975,562,242	275,858	275,858	-	461	-	461
96	6,844,774,499,347	195,661	195,661	-	306	-	306
97	7,340,436,818,157	139,439	139,439	-	204	-	204
98	7,871,276,531,153	100,628	100,628	-	137	-	137
99	8,439,770,034,252	73,747	73,747	-	94	-	94
100	9,048,567,484,049	54,382	54,382	-	65	-	65
Totals					\$ 44,282,420,764	\$ -	\$ 44,282,420,764





SECTION F

GASB No. 68 INFORMATION

GASB No. 68 Disclosure Information

This section of the report shows the GASB No. 68 information for the employers covered by ERS. Pages F-1, F-2 and F-3 show the aggregate pension expense and Deferred Outflows and (Inflows) of resources for the employers with employees covered by ERS. Pages F-4 through F-6 show the disclosure information for the individual employers that need to be incorporated into the employers' financial statements.

Page F-4 shows the employers their proportionate share of the Net Pension Liability and Pension Expense. Page F-5 shows the employers their deferred inflows and outflows by component. Page F-6 shows the employers the deferred outflows and inflows of resources to be recognized in future years' pension expense.

Pension Expense

The table below shows the aggregate Pension Expense for the ERS employers for the fiscal year ending June 30, 2024. Pension Expense for each employer is determined on a proportionate share basis and is shown on page F-4.

A. Expense

1. Service Cost	\$ 753,649,057
2. Interest on the Total Pension Liability	2,495,354,170
3. Current-Period Benefit Changes	0
4. Employee Contributions (made negative for addition here)	(342,066,080)
5. Projected Earnings on Plan Investments (made negative for addition here)	(1,563,244,102)
6. Pension Plan Administrative Expense	18,000,678
7. Other Changes in Plan Fiduciary Net Position	0
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	60,663,676
9. Recognition of Outflow (Inflow) of Resources due to Assets	(90,176,974)
10. Total Pension Expense	\$ 1,332,180,425

Recognition of Deferred Outflows and Inflows of Resources

According to paragraph 33 of GASB No. 68, *differences between expected and actual experience and changes in assumptions* are recognized in pension expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with pensions through the pension plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the 2024 fiscal year, the expected remaining service lives of all employees was 773,492.14 years. Additionally, the plan membership (active employees and inactive employees) was 155,113. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the 2024 fiscal year is 4.9866 years.



Additionally, *differences between projected and actual earnings on pension plan investments* should be recognized in pension expense using a systematic and rational method over a closed five-year period.

For this purpose, the deferred outflows and inflows of resources are recognized in the pension expense as a level dollar amount over the closed period identified above.

The current year's Deferred Outflows and (Inflows) are shown below. The aggregate Deferred Outflows and (Inflows) for the current and prior reporting periods is shown on the following page. The amounts by employer are shown on pages F-5 and F-6.

Statement of Outflows and Inflows Arising from Current Reporting Period for Fiscal Year Ending June 30, 2024

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ 282,947,390
2. Assumption Changes (gains) or losses	\$ 0
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	4.9866
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	\$ 56,741,545
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>\$ 56,741,545</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	\$ 226,205,845
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>\$ 226,205,845</u>

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ 101,343,965
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	\$ 20,268,794
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ 81,075,171



Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods for Fiscal Year Ending June 30, 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	\$ 172,653,690	\$ 111,990,014	\$ 60,663,676
2. due to Assets	\$ 599,654,854	\$ 689,831,828	\$ (90,176,974)
3. Total	\$ 772,308,544	\$ 801,821,842	\$ (29,513,298)

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	\$ 165,565,653	\$ 77,863,000	\$ 87,702,653
2. Assumption Changes	7,088,037	34,127,014	(27,038,977)
3. Net Difference between projected and actual earnings on pension plan investments	599,654,854	689,831,828	(90,176,974)
4. Total	\$ 772,308,544	\$ 801,821,842	\$ (29,513,298)

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	\$ 386,490,709	\$ 154,799,682	\$ 231,691,027
2. Assumption Changes	6,782,957	69,949,260	(63,166,303)
3. Net Difference between projected and actual earnings on pension plan investments	1,042,393,700	689,831,824	352,561,876
4. Total	\$ 1,435,667,366	\$ 914,580,766	\$ 521,086,600

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

Year Ending June 30	Net Deferred Outflows of Resources
2025	\$ (225,239,395)
2026	\$ 424,344,567
2027	\$ 240,421,013
2028	\$ 81,560,415
2029	\$ -
Thereafter	0
Total	\$ 521,086,600



Recognition of Deferred Outflows and Inflows of Resources for Fiscal Year Ending June 30, 2024

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2019	221,473,495	5.3135	13,067,080	0	0.0000
2020	71,837,371	5.2047	13,802,405	2,825,346	0.2047
2021	228,048,119	5.1542	44,245,105	51,067,699	1.1542
2022	(361,275,093)	5.0644	(71,336,210)	(147,266,463)	2.0644
2023	161,224,056	5.1703	31,182,728	98,858,600	3.1703
2024	282,947,390	4.9866	56,741,545	226,205,845	3.9866
Total			87,702,653	231,691,027	
Deferred Outflow (Inflow) due to Assumption Changes					
2019	60,320,037	5.3135	3,558,922	0	0.0000
2020	0	5.2047	0	0	0.2047
2021	0	5.1542	0	0	1.1542
2022	(154,960,000)	5.0644	(30,597,899)	(63,166,303)	2.0644
2023	0	5.1703	0	0	3.1703
2024	0	4.9866	0	0	3.9866
Total			(27,038,977)	(63,166,303)	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2019	218,549,437	5.0000	0	0	0.0000
2020	840,615,204	5.0000	168,123,040	0	0.0000
2021	(3,449,159,136)	5.0000	(689,831,828)	(689,831,824)	1.0000
2022	1,362,352,600	5.0000	272,470,521	544,941,037	2.0000
2023	693,962,490	5.0000	138,792,499	416,377,492	3.0000
2024	101,343,965	5.0000	20,268,794	81,075,171	4.0000
Total			(90,176,974)	352,561,876	

**Schedule of Employer Allocations
and Pension Amounts
At June 30, 2024
Exhibit 1**

Employer	Proportionate Share as of June 30, 2024	Change in Proportionate Share	Proportionate Share of Net Pension Liability as of June 30, 2024 7.00%	Sensitivity Analysis		Proportionate Share of Pension Expense as of June 30, 2024
				Proportionate Share of Net Pension Liability 1% Decrease 6.00%	Proportionate Share of Net Pension Liability 1% Increase 8.00%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
State of Hawaii	57.95691422%	0.67034590%	8,200,257,362	10,952,993,355	5,920,164,716	808,240,806
City and County of Honolulu	17.74926052%	-0.56305754%	2,511,322,527	3,490,982,298	1,699,869,830	230,385,238
County of Hawaii	4.67082057%	0.08035414%	660,869,049	916,725,505	448,943,016	65,539,861
County of Maui	4.58617321%	-0.16650341%	648,892,391	893,487,430	446,294,193	65,073,954
County of Kauai	2.02392762%	0.02244820%	286,363,199	393,946,320	197,252,044	24,664,201
BWS City and County of Honolulu	0.86795870%	-0.06363078%	122,806,482	163,869,200	88,794,212	11,885,052
DWS County of Hawaii	0.20295894%	-0.00918251%	28,716,428	38,318,320	20,763,176	1,783,561
DOW County of Kauai	0.13889086%	0.01326382%	19,651,509	26,222,370	14,208,861	1,641,572
HART	0.07350322%	-0.01850234%	10,399,886	13,877,288	7,519,551	-2,076,811
University of Hawaii	11.72959213%	0.03446454%	1,659,606,546	2,214,528,030	1,199,964,794	125,042,991



**Schedule of Employer Allocations
and Pension Amounts
At June 30, 2024
Exhibit 2**

	Deferred Outflows					Deferred Inflows				
	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources
Employer	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State of Hawaii	237,310,891	568,515,598	326,073	89,665,535	895,818,097	57,955,827	377,179,345	47,621,501	11,052,207	493,808,880
City and County of Honolulu	57,472,999	214,789,802	4,216,922	20,363,387	296,843,110	54,020,463	141,349,756	6,497,437	67,173,241	269,040,897
County of Hawaii	15,340,956	55,943,572	1,051,051	28,271,356	100,606,935	13,699,031	36,828,876	1,825,049	6,110,425	58,463,381
County of Maui	15,800,048	52,957,301	832,393	34,435,206	104,024,948	11,692,194	34,908,679	2,184,043	23,283,185	72,068,101
County of Kauai	7,012,710	23,263,648	356,518	7,995,257	38,628,133	5,064,510	15,337,629	985,106	9,521,674	30,908,919
BWS City and County of Honolulu	3,571,984	8,465,797	0	3,483,392	15,521,173	824,921	5,617,964	722,768	8,129,755	15,295,408
DWS County of Hawaii	835,254	1,979,598	0	110,260	2,925,112	192,895	1,313,675	169,008	3,353,430	5,029,008
DOW County of Kauai	571,589	1,354,698	0	3,026,802	4,953,089	132,004	898,987	115,657	2,102,970	3,249,618
HART	302,494	716,927	0	27,297	1,046,718	69,859	475,758	61,208	7,331,070	7,937,895
University of Hawaii	48,271,784	114,406,759	0	0	162,678,543	11,147,978	75,921,155	9,767,483	49,320,535	146,157,151



**Schedule of Employer Allocations
and Pension Amounts
At June 30, 2024
Exhibit 3**

Employer	Deferred Outflows and (Inflows) to be Recognized in Future Years					
	Total Deferred Outflow and (Inflow) 2025	Total Deferred Outflow and (Inflow) 2026	Total Deferred Outflow and (Inflow) 2027	Total Deferred Outflows of 2028	Total Deferred Outflows of 2029	Total Deferred Outflows of Thereafter
(1)	(2)	(3)	(4)	(5)	(6)	(7)
State of Hawaii	(81,132,089)	268,934,787	151,033,684	63,172,835	-	-
City and County of Honolulu	(65,707,046)	64,000,515	28,597,427	911,317	-	-
County of Hawaii	(6,301,170)	24,435,712	16,992,422	7,016,590	-	-
County of Maui	(10,593,655)	24,100,973	16,858,318	1,591,211	-	-
County of Kauai	(6,473,362)	7,359,588	4,612,637	2,220,351	-	-
BWS City and County of Honolulu	(1,946,253)	3,158,878	173,067	(1,159,927)	-	-
DWS County of Hawaii	(1,246,066)	(125,967)	(499,854)	(232,009)	-	-
DOW County of Kauai	(341,410)	1,273,473	379,861	391,547	-	-
HART	(2,997,512)	(2,534,586)	(844,609)	(514,470)	-	-
University of Hawaii	(48,500,832)	33,741,194	23,118,060	8,162,970	-	-



SECTION G

GLOSSARY OF TERMS

Glossary of Terms

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.

Accrued Service

Service credited under the system which was rendered before the date of the actuarial valuation.

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 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 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

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 (continued)

Amortization Payment

The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.

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).

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 covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.

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.

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.

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.



Glossary of Terms (continued)

Entry Age Actuarial Cost Method (EAN)

The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit 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.

GASB

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

Fiduciary Net Position

The fiduciary net position is the value of the assets of the trust.

Long-Term Expected Rate of Return

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

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 nonemployer contribution entities to plan members for benefits provided through a defined benefit pension plan.

Nonemployer Contribution Entities

Nonemployer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered nonemployer contribution entities.



Glossary of Terms (continued)

Normal Cost

The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.

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

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

1. Total service cost;
2. Interest on total pension liability;
3. Current-period benefit changes;
4. Member contributions;
5. Projected earnings on plan investments;
6. Administrative expense;
7. Other Changes in Plan Fiduciary Net Position;
8. Recognition of beginning deferred outflows (inflows) due to liabilities; and
9. Recognition of beginning deferred outflows (inflows) 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 the GASB Statement No. 67, the valuation asset is equal to the market value of assets.

