

Supplemental Health Insurance Conversion Credit Program

Presented to the Wisconsin Department of Employee Trust Funds
GASB Statement Nos. 74 and 75, Accounting and Financial
Reporting for Postemployment Benefits Other Than Pensions
December 31, 2022





June 21, 2023

Employee Trust Funds Board
Wisconsin Retirement System
4822 Madison Yards Way
Madison, Wisconsin 53705

Ladies and Gentleman:

This report provides information on behalf of the Supplemental Health Insurance Conversion Credit Program (SHICC Program) in connection with the Governmental Accounting Standards Board (GASB) Statement Nos. 74 and 75. GASB Statement No. 74 is the accounting standard, which applies to Other Postemployment Benefits (OPEB) plans that are administered through trusts or equivalent arrangements. GASB Statement No. 75 establishes accounting and financial reporting requirements for state and local government employers that provide their employees with postemployment benefits other than pension.

The 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. 74 and 75. The Net OPEB Liability/(Asset) 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 OPEB Liability/(Asset) is not an appropriate measure for assessing the need for or amount of future employer contributions. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 74 and 75 may produce significantly different results. This report may be provided to parties other than the Department of Employee Trust Funds (DETF) only in its entirety and only with the permission of the DETF. GRS is not responsible for unauthorized use of this report.

This report complements the Wisconsin Sick Leave Conversion Credit Programs Annual Actuarial Valuation report prepared for funding purposes as of December 31, 2022, and information herein should be considered along with the information from that report, especially for additional discussions of the nature of actuarial calculations and for more information related to participant data, economic, demographic, health care trend, morbidity assumptions, and benefit provisions.

This report is based upon information, furnished to us by the DETF, concerning Other Postemployment Benefits (OPEB), active members, preserved (deferred vested) members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited.

Based on the available data, the information contained in this report is accurate and fairly represents the actuarial position of the SHICC Program as of the reporting date. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as the Actuarial Standards of Practice. If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the authors of the report prior to making such decision.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

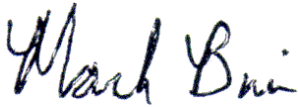
This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that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

Section I 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.

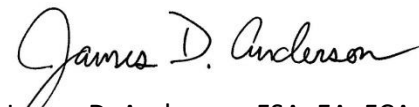
The signing actuaries are independent of the plan sponsor.

Mark Buis, James D. Anderson and Richard C. Koch Jr. are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



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



Table of Contents

Page

Section A Executive Summary

Executive Summary	1
Discussion	2

Section B Financial Statements

Statement of OPEB Expense/(Revenue) under GASB Statement No. 75	6
Statement of Outflows and Inflows Arising from Current Reporting Period	7
Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods	8
Recognition of Deferred Outflows and Inflows of Resources	9
Statement of Fiduciary Net Position	10
Statement of Changes in Fiduciary Net Position	11

Section C Required Supplementary Information

Schedule of Changes in Net OPEB Liability/(Asset) and Related Ratios Current Reporting Period	12
Schedule of Changes in Net OPEB Liability/(Asset) and Related Ratios Multiyear	13
Schedule of Net OPEB Liability/(Asset) Multiyear	14
Schedule of Contributions Multiyear	15
Notes to Schedule of Contributions	16
Schedule of Investment Returns Multiyear	17

Section D Notes to Financial Statements

Asset Allocation	18
Single Discount Rate and Summary of Membership Information	19
Sensitivity of Net OPEB Liability/(Asset)	20

Section E Summary of Benefits..... 21

Section F Development of Baseline Premium Costs..... 22

Section G Summary of Participant Data 23

Section H Valuation Methods and Actuarial Assumptions 24

Section I Calculation of the Single Discount Rate

Calculation of the Single Discount Rate	33
Projection of Contributions	34
Projection of Plan Fiduciary Net Position	36
Present Values of Projected Benefits	38

Section J Glossary of Terms..... 40



SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2022

Actuarial Valuation Date December 31, 2022
 SHICC Program's Fiscal Year Ending Date (Measurement Date & Reporting Date) December 31, 2022

Membership⁽¹⁾

Number of	
- Retirees and Beneficiaries	22,287
- Inactive, Nonretired Members	435
- Active Members	73,954
- Total	96,676
Covered Payroll ⁽²⁾	\$ 5,423,476,226

Net OPEB Liability/(Asset)

Total OPEB Liability	\$ 1,045,971,628
Plan Fiduciary Net Position	1,148,788,252
Net OPEB Liability/(Asset)	\$ (102,816,624)
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	109.83 %
Net OPEB Liability/(Asset) as a Percentage of Covered Payroll	(1.90)%

Development of the Single Discount Rate

Single Discount Rate	6.80 %
Long-Term Municipal Bond Rate ⁽³⁾	4.05 %

Total OPEB Expense/(Revenue)

\$ 3,810,612

Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future OPEB Expenses/(Revenues)

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 0	\$ 153,872,476
Changes in assumptions	105,060,071	0
Net difference between projected and actual earnings on OPEB plan investments	86,033,698	0
Total	\$ 191,093,769	\$ 153,872,476

⁽¹⁾ Retiree and Beneficiary as well as inactive number counts include only those members with a SHICC account balance.

⁽²⁾ Covered payroll is for 2022 and was provided by DETF.

⁽³⁾ Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 30, 2022. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.

Discussion

Accounting Standard

For Other Postemployment Benefits (OPEB) plans that are administered through trusts or equivalent arrangements, the applicable accounting standards are Governmental Accounting Standards Board (GASB) Statement No. 74 and GASB Statement No. 75. GASB Statement No. 75 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose Net OPEB Liability/(Asset), OPEB expense/(revenue), and other information associated with providing OPEB to their employees (and former employees) on their financial statements.

GASB Statement Nos. 74 and 75 are effective for fiscal years beginning after June 15, 2016 and June 15, 2017, respectively.

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. As a result, the plan sponsor will be responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

Financial Statements

GASB Statement No. 75 requires state and local government employers to recognize the net OPEB liability/(asset) and the OPEB expense/(revenue) on their financial statements, along with the related deferred outflows and inflows of resources. The net OPEB liability/(asset) is the difference between the total OPEB 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.

GASB Statement No. 75 states the employer contributions made to the OPEB plan subsequent to the measurement date and before the end of the employer's reporting period should be reported as a deferred outflow of resources. The information contained in this report does not incorporate any employer contributions made subsequent to the measurement date of December 31, 2022.

The OPEB expense/(revenue) recognized each fiscal year is equal to the change in the net OPEB liability/(asset) from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

GASB Statement No. 74 requires defined benefit OPEB plans which are administered as trusts or equivalent arrangements 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 assets and liabilities of the OPEB plan at the end of the OPEB 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 expense, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 75 requires the notes of the employer's financial statements to disclose the total OPEB expense/(revenue), the OPEB plan's liabilities and assets, and deferred outflows of resources and inflows of resources related to OPEB.

GASB Statement Nos. 74 and 75 require the notes of the financial statements for employers and OPEB plans to include certain additional information. The list of disclosure items should include:

- The name of the OPEB plan, the administrator of the OPEB plan, and the identification of whether the OPEB plan is a single-employer, agent, or cost-sharing OPEB plan;
- A description of the benefits provided by the plan;
- A brief description of changes in benefit terms or assumptions that affected the measurement of the total OPEB liability since the prior measurement date;
- The number of plan members by category and if the plan is closed;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The OPEB plan's investment policies;
- The OPEB plan's fiduciary net position and the net OPEB liability/(asset);
- The net OPEB liability/(asset) using +/- 1% on the discount rate;
- The net OPEB liability/(asset) using +/- 1% on the healthcare trend rate;
- Significant assumptions and methods used to calculate the total OPEB liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

OPEB plans that are administered through trusts or equivalent arrangements are required to disclose additional information in accordance with GASB Statement No. 74. This information includes:

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

Required Supplementary Information

GASB Statement No. 74 requires a 10-year fiscal history of:

- Sources of changes in the net OPEB liability/(asset);
- Information about the components of the net OPEB liability/(asset) and related ratios, including the OPEB plan's fiduciary net position as a percentage of the total OPEB liability, and the net OPEB liability/(asset) 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
- For plans with an actuarially determined contribution, the schedule covering each of the 10 most recent fiscal years of the actuarially determined contribution, contributions to the OPEB plan and related ratios.

These tables will be built prospectively as the information becomes available.

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 is expected to remain level as a percentage of payroll.
2. The unfunded liability is expected to decrease in dollar amount until it is fully funded.
3. The funded status of the plan will remain very close to a 100% funded ratio under the Frozen Initial Liability cost method.

This funding policy results in the expectation that the plan's assets will be able to fully pay for promised benefits through at least 2122. 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.

Frequency and Timing of the Actuarial Valuation

An actuarial valuation to determine the total OPEB liability is required to be performed at least every two years. For the employer's financial reporting purposes, the net OPEB liability/(asset) and OPEB expense/(revenue) should be measured as of the employer's "measurement date," which may not be earlier than the employer's prior fiscal year-end date. If the actuarial valuation used to determine the total OPEB liability is not calculated as of the measurement date, the total OPEB liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total OPEB liability shown in this report is based on an actuarial valuation performed as of December 31, 2022 and a measurement date of December 31, 2022.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects: (1) a long-term expected rate of return on OPEB 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 OPEB plan investments is 6.80%; the municipal bond rate is 4.05% (based on the daily rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting Single Discount Rate is 6.80%.

Actuarial Assumptions

The actuarial assumptions used to value the liabilities are outlined in Section H, including detail related to demographic assumptions, economic assumptions, the healthcare trend assumption, as well as the cost method used to develop the OPEB expense/(revenue). The assumptions used were adopted in connection with separate experience studies of the Wisconsin Retirement System and the Wisconsin Sick Leave Conversion Credit Programs covering the period 2018-2020.

Future Uncertainty or Risk

Future results may differ from those anticipated in this valuation. Reasons include, but are not limited to:

- Actual medical trend differing from expected;
- Changes in the healthcare plan designs offered to active and retired members; and
- Participant behavior differing from expected; e.g.,
 - Elections at retirement;
 - One-person versus two-person coverage elections; and
 - Time of retirement or termination.

Benefits Valued

The benefit provisions that were valued are described in Section E. The valuation is required to be performed on the current benefit terms and existing legal agreements. Consideration is to be given to the written plan document as well as other communications between the employer and plan members and an established pattern of practice for cost sharing. The summary of major plan provisions is designed to outline principal plan benefits. If the plan summary is not in accordance with the actual provisions, please alert the actuaries immediately, so they can be sure the proper provisions are valued.

Effective Date and Transition

GASB Statement Nos. 74 and 75 are effective for fiscal years beginning after June 15, 2016, and June 15, 2017, respectively.



SECTION B

FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Supplemental Health Insurance Conversion Credit Program. 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 OPEB Expense/(Revenue) under GASB Statement No. 75 Fiscal Year Ended December 31, 2022

A. Expense

1. Service Cost	\$	25,672,432
2. Interest on the Total OPEB Liability		69,993,566
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		0
5. Projected Earnings on Plan Investments (made negative for addition here)		(91,652,432)
6. OPEB Plan Administrative Expense		678,379
7. Other Changes in Plan Fiduciary Net Position		0
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		(12,388,603)
9. Recognition of Outflow (Inflow) of Resources due to Assets		11,507,270
10. Total OPEB Expense/(Revenue)	\$	3,810,612

Recognition of Deferred Outflows and Inflows of Resources

Differences between expected and actual experience and changes in assumptions are recognized in the OPEB expense/(revenue) 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 OPEB through the OPEB plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active employees in the plan was approximately 829,495 years. Additionally, the total plan membership (active employees and inactive employees) was 94,782. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 8.7516 years.

Additionally, differences between projected and actual earnings on OPEB plan investments should be recognized in the OPEB expense/(revenue) 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 OPEB expense/(revenue) as a level dollar amount over the closed period identified above.

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

A. Outflows (Inflows) of Resources Due to Liabilities

1. Difference between expected and actual experience of the Total OPEB Liability (gains) or losses	\$ (39,919,698)
2. Assumption Changes (gains) or losses	\$ 0
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	8.7516
4. Outflow (Inflow) of Resources to be recognized in the current OPEB expense/(revenue) for the difference between expected and actual experience of the Total OPEB Liability	\$ (4,561,417)
5. Outflow (Inflow) of Resources to be recognized in the current OPEB expense/(revenue) for assumption changes	\$ 0
6. Outflow (Inflow) of Resources to be recognized in the current OPEB expense/(revenue) due to Liabilities	\$ (4,561,417)
7. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses/(revenues) for the difference between expected and actual experience of the Total OPEB Liability	\$ (35,358,281)
8. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses/(revenues) for assumption changes	\$ 0
9. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses/(revenues) due to Liabilities	\$ (35,358,281)

B. Outflows (Inflows) of Resources Due to Assets

1. Net difference between projected and actual earnings on OPEB plan investments (gains) or losses	\$ 266,818,102
2. Recognition period for Assets {in years}	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current OPEB expense/(revenue) due to Assets	\$ 53,363,620
4. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses/(revenues) due to Assets	\$ 213,454,482

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

A. Outflows and Inflows of Resources by Source to be Recognized in Current OPEB Expense/(Revenue)

	Outflows of Resources	Inflows of Resources	Net Outflows/(Inflows) of Resources
1. Differences between expected and actual experience	\$ 0	\$ 28,528,084	\$ (28,528,084)
2. Assumption changes	16,139,481	0	16,139,481
3. Net difference between projected and actual earnings on OPEB plan investments	11,507,270	0	11,507,270
4. Total	\$ 27,646,751	\$ 28,528,084	\$ (881,333)

B. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future OPEB Expenses/(Revenues)

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/ (Inflows) of Resources
1. Differences between expected and actual experience	\$ 0	\$ 153,872,476	\$ (153,872,476)
2. Assumption changes	105,060,071	0	105,060,071
3. Net difference between projected and actual earnings on OPEB plan investments	86,033,698	0	86,033,698
4. Total	\$ 191,093,769	\$ 153,872,476	\$ 37,221,293

C. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future OPEB Expenses/(Revenues)

Year Ending December 31	Net Deferred Outflows/ (Inflows) of Resources
2023	\$ (22,567,165)
2024	556,915
2025	17,514,517
2026	43,812,370
2027	(4,883,082)
2028	1,479,575
2029	4,736,525
2030	(3,428,362)
2031	0
2032	0
Thereafter	0
Total	\$ 37,221,293



Recognition of Deferred Outflows and Inflows of Resources

Fiscal Year Ended December 31, 2022

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					
2017	\$ (31,625,769)	9.1767	\$ (3,446,312)	\$ (10,947,897)	3.1767
2018	(41,561,731)	9.1556	(4,539,487)	(18,864,296)	4.1556
2019	(55,251,074)	8.6032	(6,422,154)	(29,562,458)	4.6032
2020	(47,585,575)	8.6005	(5,532,885)	(30,986,920)	5.6005
2021	(36,204,282)	8.9930	(4,025,829)	(28,152,624)	6.9930
2022	(39,919,698)	8.7516	(4,561,417)	(35,358,281)	7.7516
Total			\$ (28,528,084)	\$ (153,872,476)	
Deferred Outflow (Inflow) Due to Assumption Changes					
2017	\$ 0	9.1767	\$ 0	\$ 0	3.1767
2018	25,179,408	9.1556	2,750,165	11,428,583	4.1556
2019	0	8.6032	0	0	4.6032
2020	0	8.6005	0	0	5.6005
2021	120,410,120	8.9930	13,389,316	93,631,488	6.9930
2022	0	8.7516	0	0	7.7516
Total			\$ 16,139,481	\$ 105,060,071	
Deferred Outflow (Inflow) Due to Differences between Projected and Actual Earnings on Plan Investments					
2018	\$ 108,429,156	5.0000	\$ 21,685,832	\$ 0	0.0000
2019	(115,620,400)	5.0000	(23,124,080)	(23,124,080)	1.0000
2020	(84,788,000)	5.0000	(16,957,600)	(33,915,200)	2.0000
2021	(117,302,508)	5.0000	(23,460,502)	(70,381,504)	3.0000
2022	266,818,102	5.0000	53,363,620	213,454,482	4.0000
Total			\$ 11,507,270	\$ 86,033,698	

Statement of Fiduciary Net Position as of December 31, 2022

	2022
Assets	
Cash and Deposits	\$ 4,350,833
Receivables	
Contributions	\$ 627,790
Accounts Receivable - Due From Other Benefit Programs	456,726
Accounts Receivable - Other	2,264
Total Receivables	\$ 1,086,780
Investments	
Investment in Core Fund	\$ 1,143,614,273
Total Investments	\$ 1,143,614,273
Total Assets	\$ 1,149,051,886
 Liabilities	
Payables	
Accounts Payable - Due to Other Benefit Programs	\$ 263,634
Total Liabilities	\$ 263,634
Net Position Restricted for OPEB	\$ 1,148,788,252

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

	2022
Additions	
Contributions	
Employer	\$ 5,437,688
Total Contributions	\$ 5,437,688
Investment Income	
Net Appreciation in Fair Value of Investments	\$ (175,165,670)
Net Investment Income	\$ (175,165,670)
Total Additions	\$ (169,727,982)
 Deductions	
Benefit Payments	\$ 52,511,215
OPEB Plan Administrative Expense	678,379
Total Deductions	\$ 53,189,594
Net Increase in Net Position	\$ (222,917,576)
 Net Position Restricted for OPEB	
Beginning of Year	\$ 1,371,705,828
End of Year	\$ 1,148,788,252

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Supplemental Health Insurance Conversion Credit Program. 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 OPEB Liability/(Asset) and Related Ratios Current Reporting Period Fiscal Year Ended December 31, 2022

A. Total OPEB Liability	
1. Service cost	\$ 25,672,432
2. Interest on the Total OPEB Liability	69,993,566
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total OPEB Liability	(39,919,698)
5. Changes of assumptions	0
6. Benefit payments	(52,511,215)
7. Net change in Total OPEB Liability	<u>3,235,085</u>
8. Total OPEB Liability – Beginning	<u>1,042,736,543</u>
9. Total OPEB Liability – Ending	<u><u>\$ 1,045,971,628</u></u>
B. Plan Fiduciary Net Position	
1. Contributions – employer	\$ 5,437,688
2. Contributions – nonemployer contributing entities	0
3. Contributions – employee	0
4. Net investment income	(175,165,670)
5. Benefit payments	(52,511,215)
6. OPEB plan administrative expense	(678,379)
7. Other	0
8. Net change in Plan Fiduciary Net Position	<u>(222,917,576)</u>
9. Plan Fiduciary Net Position – Beginning	<u>1,371,705,828</u>
10. Plan Fiduciary Net Position – Ending	<u><u>\$ 1,148,788,252</u></u>
C. Net OPEB Liability/(Asset)	<u><u>\$ (102,816,624)</u></u>
D. Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	109.83 %
E. Covered payroll⁽¹⁾	\$ 5,423,476,226
F. Net OPEB Liability/(Asset) as a percentage of covered-employee payroll	(1.90)%

⁽¹⁾ Covered payroll was provided by DETF.

Schedules of Required Supplementary Information

Schedule of Changes in Net OPEB Liability/(Asset) and Related Ratios Multiyear

Measurement Date - December 31,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total OPEB Liability										
Service cost	\$ 25,672,432	\$ 23,485,958	\$ 24,092,160	\$ 25,480,349	\$ 23,419,279	\$ 23,090,058				
Interest on the Total OPEB Liability	69,993,566	63,660,991	64,393,209	65,525,451	65,968,930	65,855,518				
Changes of benefit terms	0	0	0	0	0	0				
Difference between expected and actual experience	(39,919,698)	(36,204,282)	(47,585,575)	(55,251,074)	(41,561,731)	(31,625,769)				
Changes of assumptions	0	120,410,120	0	0	25,179,408	0				
Benefit payments	(52,511,215)	(52,631,984)	(49,481,918)	(52,989,110)	(55,398,266)	(56,420,238)				
Net change in Total OPEB Liability	3,235,085	118,720,803	(8,582,124)	(17,234,384)	17,607,620	899,569				
Total OPEB Liability - Beginning	1,042,736,543	924,015,740	932,597,864	949,832,248	932,224,628	931,325,059				
Total OPEB Liability - Ending (a)	\$ 1,045,971,628	\$ 1,042,736,543	\$ 924,015,740	\$ 932,597,864	\$ 949,832,248	\$ 932,224,628				
Plan Fiduciary Net Position										
Employer contributions	\$ 5,437,688	\$ 15,657,937	\$ 15,080,311	\$ 14,368,898	\$ 18,207,993	\$ 17,864,218				
Nonemployer contributing entities contributions	0	0	0	0	0	0				
Employee contributions	0	0	0	0	0	0				
OPEB plan net investment income	(175,165,670)	200,598,941	159,467,130	180,270,630	(36,549,391)	141,758,344				
Benefit payments	(52,511,215)	(52,631,984)	(49,481,918)	(52,989,110)	(55,398,266)	(56,420,238)				
OPEB plan administrative expense	(678,379)	(710,273)	(639,658)	(339,791)	(261,661)	(292,733)				
Other	0	0	0	0	0	0				
Net change in Plan Fiduciary Net Position	(222,917,576)	162,914,621	124,425,865	141,310,627	(74,001,325)	102,909,591				
Plan Fiduciary Net Position - Beginning	1,371,705,828	1,208,791,207	1,084,365,342	943,054,715	1,017,056,040	914,146,449				
Plan Fiduciary Net Position - Ending (b)	\$ 1,148,788,252	\$ 1,371,705,828	\$ 1,208,791,207	\$ 1,084,365,342	\$ 943,054,715	\$ 1,017,056,040				
Net OPEB Liability/(Asset) - ending (a) - (b)	\$ (102,816,624)	\$ (328,969,285)	\$ (284,775,467)	\$ (151,767,478)	\$ 6,777,533	\$ (84,831,412)				
Plan Fiduciary Net Position as a percentage of Total OPEB Liability	109.83 %	131.55 %	130.82 %	116.27 %	99.29 %	109.10 %				
Covered payroll⁽¹⁾	\$ 5,423,476,226	\$ 5,215,543,512	\$ 5,018,527,271	\$ 4,796,071,588	\$ 4,562,647,414	\$ 4,454,515,567				
Net OPEB Liability/(Asset) as a percentage of covered-employee payroll	(1.90)%	(6.31)%	(5.67)%	(3.16)%	0.15 %	(1.90)%				

⁽¹⁾ Covered payroll was provided by DETF.



Schedules of Required Supplementary Information

Schedule of the Net OPEB Liability/(Asset) Multiyear

FY Ending December 31,	Total OPEB Liability	Plan Net Position	Net OPEB Liability/(Asset)	Plan Net Position as a % of Total OPEB Liability	Covered Payroll ⁽¹⁾	Net OPEB Liability/(Asset) as a % of Covered Payroll
2013						
2014						
2015						
2016						
2017	\$ 932,224,628	\$ 1,017,056,040	\$ (84,831,412)	109.10 %	\$ 4,454,515,567	(1.90)%
2018	949,832,248	943,054,715	6,777,533	99.29 %	4,562,647,414	0.15 %
2019	932,597,864	1,084,365,342	(151,767,478)	116.27 %	4,796,071,588	(3.16)%
2020	924,015,740	1,208,791,207	(284,775,467)	130.82 %	5,018,527,271	(5.67)%
2021	1,042,736,543	1,371,705,828	(328,969,285)	131.55 %	5,215,543,512	(6.31)%
2022	1,045,971,628	1,148,788,252	(102,816,624)	109.83 %	5,423,476,226	(1.90)%

⁽¹⁾ Covered payroll was provided by DETF.

Schedule of Contributions Multiyear

FY Ending December 31,	Actuarially Determined Contribution ⁽¹⁾	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll ⁽²⁾	Actual Contribution as a % of Covered Payroll
2013					
2014					
2015					
2016					
2017	\$ 17,864,218	\$ 17,864,218	\$ 0	\$ 4,454,515,567	0.40 %
2018	18,207,993	18,207,993	0	4,562,647,414	0.40 %
2019	14,368,898	14,368,898	0	4,796,071,588	0.30 %
2020	15,080,311	15,080,311	0	5,018,527,271	0.30 %
2021	15,657,937	15,657,937	0	5,215,543,512	0.30 %
2022	5,437,688	5,437,688	0	5,423,476,226	0.10 %

⁽¹⁾ Since it is the actuary's understanding that the practice is to require employers to contribute the percent-of-payroll employer contribution rate shown in the actuarial valuation report, the Actuarially Determined Contributions shown in the Schedule of Contributions are the actual contributions made by the participating employers in the fiscal year.

⁽²⁾ Covered payroll was provided by DETF.

Notes to Schedule of Contributions

Methods and Assumptions Used to Determine Contribution Amounts for the Fiscal Year Ending December 31, 2022*:

Actuarial Cost Method	Frozen Initial Liability
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	5 years
Asset Valuation Method	5-year smoothed value
Wage Inflation	3.00%
Salary Increases	3.1% to 8.6% including inflation.
Investment Rate of Return	7.00%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2018 valuation pursuant to an experience study of the period 2015-2017.
Mortality	Fully generational mortality utilizing the WRS 2018 Mortality Table adjusted for future mortality improvements using the MP-2018 fully generational improvement scale (multiplied by 60%).
Health Care Trend Rates	3.0% per year

Other Information:

Notes There were no benefit changes during the year.

** Based on the December 31, 2020 Annual Actuarial Valuation of the Wisconsin Accumulated Sick Leave Conversion Credit Programs; assumptions were updated effective with the December 31, 2021 Annual Actuarial Valuation which calculates the contribution rate for fiscal year 2023.*

Schedule of Investment Returns Multiyear

<u>FY Ending December 31,</u>	<u>Annual Return⁽¹⁾</u>
2017	15.85 %
2018	(3.56)%
2019	19.49 %
2020	15.06 %
2021	17.03 %
2022	(12.94)%

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

SECTION D

NOTES TO FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the Supplemental Health Insurance Conversion Credit Program. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Long-Term Expected Return on Plan Assets

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The long-term expected rate of return is reviewed every three years in conjunction with the Wisconsin Retirement System experience study. For each major asset class that is included in the OPEB plan's target asset allocation as of December 31, 2022, these best estimates of geometric real rates of return were provided by DETF and are summarized in the following table:

Core Asset Allocation

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Global Equities	48.00%	5.00%
Fixed Income	25.00%	2.70%
Inflation Sens. Assets	19.00%	1.10%
Real Estate	8.00%	2.60%
Private Equity/Debt	15.00%	6.90%
Cash	-15.00%	0.90%
Total	100.00 %	

⁽¹⁾ Long-term expected real rate of return is based on New England Pension Consultants long-term US CPI (inflation) forecast of 2.5%.

Single Discount Rate

A Single Discount Rate of 6.80% was used to measure the total OPEB liability. This Single Discount Rate was based on the expected rate of return on OPEB plan investments of 6.80%. The projection of cash flows used to determine this Single Discount Rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on these assumptions, the OPEB 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 OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability and projections were excluded from this report.

Summary of Membership Information

The following table provides a summary of the number of participants in the plan as of the valuation date:

Retirees and Beneficiaries	22,287
Inactive, Nonretired Members	435
Active Members	<u>73,954</u>
Total Plan Members	96,676

Sensitivity of Net OPEB Liability/(Asset)

Regarding the sensitivity of the net OPEB liability/(asset) to changes in the Single Discount Rate, the following presents the plan's net OPEB liability/(asset), calculated using a Single Discount Rate of 6.80%, as well as what the plan's net OPEB liability/(asset) would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

Sensitivity of Net OPEB Liability/(Asset) to the Single Discount Rate Assumption

Discount Rate	Current Single Discount		
	1% Decrease 5.80%	Rate Assumption 6.80%	1% Increase 7.80%
Total OPEB Liability	\$ 1,158,383,307	\$ 1,045,971,628	\$ 949,394,767
Plan Fiduciary Net Position	1,148,788,252	1,148,788,252	1,148,788,252
Net OPEB Liability/(Asset)	\$ 9,595,055	\$ (102,816,624)	\$ (199,393,485)

Regarding the sensitivity of the net OPEB liability/(asset) to changes in the health care cost trend rates, the following presents the plan's net OPEB liability/(asset), calculated using the assumed trend rates as well as what the plan's net OPEB liability/(asset) would be if it were calculated using a trend rate that is one percent lower or one percent higher:

Sensitivity of Net OPEB Liability/(Asset) to the Health Care Cost Trend Rate Assumption

Health Care Cost Trend Rate	Current Health Care Cost		
	1% Decrease	Trend Rate Assumption	1% Increase
Total OPEB Liability	\$ 976,395,887	\$ 1,045,971,628	\$ 1,113,099,204
Plan Fiduciary Net Position	1,148,788,252	1,148,788,252	1,148,788,252
Net OPEB Liability/(Asset)	\$ (172,392,365)	\$ (102,816,624)	\$ (35,689,048)

SECTION E

SUMMARY OF BENEFITS

Section 40.05(4)(b)

Accumulated Sick Leave Conversion Credit Program Summary of Accumulation and Payment Conditions

Accumulation. For purposes of estimating sick leave balances at retirement, each individual was assumed to continue accumulating unused sick leave at the same rate as in the past but not less than 25% of their gross accrual rate (based upon their employer group). The annual gross accrual rates used are 12 days for University Hospital and Non-Staff University employees and 16.25 days for all other members except for one small sub-group of 68 members (Beyond Vision) whose accrual rate is 6.4 days based on documentation received from the Department of Employee Trust Funds.

Eligibility for Payment of Accrued Sick Leave. Termination of employment with 20 or more years of service or eligibility for an immediate annuity from the Wisconsin Retirement System. State elected officials and certain State administrative officials terminating before their minimum service retirement age retain eligibility for benefits at their minimum service retirement age providing they do not elect a WRS separation benefit.

Amount of Payment for Unused Sick Leave. A conversion credit is computed at the time of retirement or death by multiplying the number of days of unused sick leave by the highest basic pay rate. The conversion credit is then used to cover the cost of health insurance premiums for the employee and eligible dependents. Unused portions are carried forward from year to year without interest and when total health insurance premiums paid on behalf of the retired employee equal or exceed the conversion credit, no further payments are made under the ASLCC Program. Payments from the sick leave account may be escrowed indefinitely after retirement for participants who provide evidence of comparable health insurance coverage from another source.

The section above describes the provisions of the ASLCC Program. The Supplemental Health Insurance Conversion Credit Program provides matching credits for participants retiring with 15 or more years of State service as follows:

- **Protective:** Match up to 78 hours (9.75 days) per full year of service through 24 years, plus up to 104 hours (13 days) per full year of service over 24 years.

- **Others:** Match up to 52 hours (6.5 days) per full year of service through 24 years, plus up to 104 hours (13 days) per full year of service over 24 years.

ASLCC Program sick leave conversion credits must be used before SHICC Program credits.

SECTION F

DEVELOPMENT OF BASELINE PREMIUM COSTS

Development of Baseline Premium Costs

Retirees and Beneficiaries

	Rate Category	
	Non-Medicare	Medicare
1. Number of 1-Person Contracts ⁽¹⁾	2,121	7,496
2. Total Monthly Premium of 1-Person Contracts	\$1,885,000	\$2,662,289
3. Average 1-Person Premium as of 1/1/2023 (2./1.)	\$ 888.73	\$ 355.16
4. Number of Multiple-Person Contracts ⁽¹⁾	1,874	7,352
5. Total Monthly Premium of Multiple-Person Contracts	\$3,612,002	\$5,275,659
6. Average Multiple-Person Premium as of 1/1/2023 (5./4.)	\$ 1,927.43	\$ 717.58
7. Blended Net Premium as of 1/1/2023 (50%*3. + 50%*6.)⁽²⁾	\$ 1,408.08	\$ 536.37
First Prior Year	\$ 1,341.73	\$ 553.78

⁽¹⁾ Retirees with an account status of active, a premium populated in the data provided and a sick leave balance greater than \$0. The number counts above were used strictly for developing average premiums and may be different from retiree counts shown throughout this report.

⁽²⁾ Used in the valuation of all non-active annuitants (i.e., current actives, preserved members and on-hold/escrowed annuitants). For active annuitants, the actual premiums provided in the data are used. Net premium is a blend of the 1-person and 2-person average premiums based on the 50% 1-person/2-person election percent assumption.

The average premiums were calculated assuming the premiums provided in the annuitant data were premiums effective for calendar year 2023.

For retirees provided with a premium amount, a sick leave account balance, and an account status of active, the premium amounts supplied in the data were used directly. In the case of individuals not covered by Medicare, they were assumed to convert to the average Medicare premium upon attainment of Medicare eligibility pro-rated based on the ratio of their non-Medicare premium to the average non-Medicare premium. For non-retired members, the projected non-Medicare blended net premium was applied to Medicare eligibility and the projected Medicare blended net premium was applied after Medicare eligibility.

SECTION G

SUMMARY OF PARTICIPANT DATA

Summary of Participant Data

Active Participants

	State Employees (Non-University)	University	University Hospital	Total
Number	32,102	31,787	10,065	73,954
Annual Payroll	\$2,167,949,202	\$ 2,635,489,737	\$768,457,061	\$ 5,571,896,000
Accrued Unused Sick Days	2,672,790 days	2,820,096 days	357,956 days	5,850,842 days
Averages: Age	44.8 years	45.8 years	40.6 years	44.7 years
Service	11.3 years	10.7 years	7.9 years	10.5 years
Sick Leave Days	83.3 days	88.7 days	35.6 days	79.1 days

Terminated Vested Participants

Number	ASLCC Sick Leave Balance	SHICC Sick Leave Balance	Total Sick Leave Balance
435	\$20,043,948	\$14,266,526	\$34,310,474

Members noted above terminated with 20 or more years of service and are eligible to begin using sick leave credits to cover health care costs upon reaching retirement age. Further, the data above includes only those terminated vested participants with a SHICC account balance.

Retirees and Beneficiaries Provided by ETF

Status	Number	ASLCC Sick Leave Balance	SHICC Sick Leave Balance	Total Sick Leave Balance
Active Annuitants with 1-Person Coverage	8,929	\$257,773,223	\$ 447,230,907	\$ 705,004,130
Active Annuitants with Multi-Person Coverage	8,979	396,988,870	629,060,513	1,026,049,383
Escrowed/On-Hold Annuitants	4,379	240,007,802	195,049,789	435,057,591
Total	22,287	\$894,769,895	\$1,271,341,209	\$2,166,111,104

Data in the table above includes only those retirees and beneficiaries with a SHICC account balance. Further, annuitants provided in the data with any of the following were excluded from the valuation:

- An account status other than active, escrowed or on-hold (i.e., closed, canceled, ineligible, etc.); or
- A \$0 sick leave balance.

SECTION H

VALUATION METHODS AND ACTUARIAL ASSUMPTIONS

Actuarial Valuation Method

For funding requirement purposes, the Supplemental Health Insurance Conversion Credit Program uses the Frozen Initial Liability Cost Method. GASB Statement No. 74 requires the use of the Entry Age Normal (EAN) Cost Method for accounting purposes; as such we develop the Total OPEB Liability based on EAN.

Asset Valuation Method

The market value of assets was used for GASB valuation purposes.

Actuarial Methods and Assumptions used in Valuations

The principal areas of risk assumption are:

- Long-term **rates of investment return** likely to be generated by system assets;
- **Rates of mortality** among participants, retirees and beneficiaries;
- **Rates of withdrawal** of active participants;
- **Rates of disability** among participants;
- **Patterns of salary increases** to be experienced by participants;
- The age and service **distribution of actual retirements**; and
- Future **rates of sick leave usage** by plan participants.

In an actuarial valuation, the actuary projects the monetary effect of each risk assumption for each distinct experience group, for the next year and for each year over the next half-century or longer.

Once actual risk experience has occurred and been observed, it will not coincide exactly with assumed risk experience, regardless of the skill of the actuary, the completeness of the data, and the precision of the calculations. Each valuation provides a complete recalculation of assumed future risk experience and takes into account all past differences between assumed and actual risk experience. The result is a continual series of small adjustments to the computed contribution rate. From time to time it becomes necessary to adjust the package of risk measurements to reflect basic experience trends -- but not random year to year fluctuations.

Annual Actuarial Valuations

Assumptions Adopted by ETF Board after Consulting with Actuary

Economic Assumptions

The rationale for these assumptions is based upon an experience study covering the period 2018-2020. The experience study for the Wisconsin Retirement System developed separate assumptions for State and non-State employees. Since the Sick Leave Conversion Credit Programs are only available to State employees, the State assumptions were used in this valuation with the exception of Public School employees. The Public Schools group did not have enough State employees to develop separate assumptions, therefore, the non-State assumptions were used for this group.

The long-term rates of investment return used in making the valuation was 6.8% a year, compounded yearly.

The **Wage Inflation Rate** assumed in this valuation was 3.00% per year. The wage inflation rate is defined to be the portion of total pay increases for an individual that is due to macro-economic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects.

No specific **Price Inflation** assumption is required to perform this valuation. The price inflation assumption used to evaluate the investment return assumption is 2.4%.

Health Care Cost Trend. The valuation of the Sick Leave Programs requires a health care cost trend assumption for purposes of projecting future health care costs. The trend vector used in this valuation begins with a near-term trend assumption and declines over time to an ultimate trend rate. The near-term rates reflect the increases in the current cost of health care goods and services. The process of trending down to a lower ultimate trend relies on the theory that premium levels will moderate over the long-term, otherwise the healthcare sector would eventually consume the entire GDP. It is on this basis that projected premium rate increases continue to exceed wage inflation for the next eleven years, but by less each year until leveling off at an ultimate rate, assumed to be 3.50% in this valuation; see below for the trend vector used in this valuation.

Year Beginning January 1,	Increase in Premiums
2024	5.75 %
2025	5.50
2026	5.25
2027	5.00
2028	4.75
2029	4.50
2030	4.25
2031	4.00
2032	3.75
2033	3.75
2034 & Later	3.50

Salary adjustment factors used to project earnings for each participant between the valuation date and the participant’s retirement age are shown below for sample years of service. This assumption is used to project a participant’s current earnings to the earnings upon which benefits will be based.

Sick leave extracts were provided for State employees, University and University Hospital units of government. These extracts were then matched to our pension valuation data where assumptions are developed for the groups shown below:

% Merit and Longevity Increase Next Year						
Service	General	Executive & Elected	University Teachers	Public School Teachers	Protective	
					With S.S.	W/O S.S.
1	3.5 %	2.5 %	3.0 %	5.6 %	4.8 %	5.5 %
2	3.5 %	2.5 %	3.0 %	5.6 %	4.8 %	5.5 %
3	3.1 %	2.0 %	2.9 %	5.2 %	4.1 %	4.7 %
4	2.8 %	1.6 %	2.8 %	4.7 %	3.5 %	3.8 %
5	2.5 %	1.1 %	2.7 %	4.3 %	2.8 %	3.0 %
10	1.5 %	0.2 %	2.2 %	2.6 %	1.1 %	0.9 %
15	1.1 %	0.2 %	1.7 %	1.4 %	0.8 %	0.5 %
20	0.9 %	0.2 %	1.2 %	0.6 %	0.7 %	0.4 %
25	0.6 %	0.2 %	0.9 %	0.3 %	0.6 %	0.3 %
30	0.4 %	0.2 %	0.7 %	0.2 %	0.5 %	0.2 %

If the number of active participants remains constant, then the total active participant payroll will increase 3.0% a year, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

Decrement Probabilities

The **mortality table** used was the 2020 WRS Experience Table adopted by the Board in connection with the 2018-2020 Experience Study. The rates in this table were based on actual WRS experience adjusted for future mortality improvements using the MP-2021 fully generational improvement scale from a base year of 2010. Sample retirement values from this table are shown below. This assumption is used to measure the probabilities of participants dying before retirement and the probabilities of each benefit payment being made after retirement. For any current annuitants with a multiple person contract, no mortality was applied in the calculation of the present value of future benefits.

Single Life Expectancy 2020 WRS Experience Table

Sample Attained Ages in 2022	Future Life Expectancy (Years) ⁽¹⁾	
	Males	Females
40	47.1	49.2
45	41.9	44.0
50	36.7	38.7
55	31.6	33.6
60	26.7	28.7
65	22.0	23.9
70	17.5	19.3
75	13.4	14.9
80	9.7	11.0
85	6.7	7.7

⁽¹⁾ With a fully generational mortality table, the mortality rate depends on the year of birth. Later years of birth will correspond to a lower mortality rate at a given age.

The values shown above are for non-disabled participants.

Active Participant Mortality Rates

Sample Attained Ages in 2022	Mortality Rates ⁽¹⁾	
	Males	Females
20	0.000400	0.000165
25	0.000214	0.000129
30	0.000351	0.000226
35	0.000512	0.000325
40	0.000640	0.000428
45	0.000820	0.000544
50	0.001190	0.000783
55	0.001879	0.001245
60	0.003102	0.001962
65	0.005005	0.003016
70	0.007489	0.004983
75	0.010923	0.009507
80	0.021800	0.019586

⁽¹⁾ *With a fully generational mortality table, the mortality rate depends on the year of birth. Later years of birth will correspond to a lower mortality rate at a given age.*

This assumption is used to measure the probability of participants dying while in service.

Rates of Retirement for Those Eligible to Retire

Normal Retirement Pattern

Age	General		Executive & Elected	University		Public School		Protective ⁽¹⁾	
	Males	Females		Males	Females	Males	Females	With S.S.	W/O S.S.
50								7.5%	3.0%
51								9.0%	3.5%
52								11.0%	4.5%
53								25.0%	17.0%
54								20.0%	24.0%
55								20.0%	29.0%
56								20.0%	32.0%
57	19.0%	19.0%	12.0%	12.0%	10.0%	31.0%	27.5%	20.0%	23.0%
58	19.0%	19.0%	12.0%	16.0%	20.0%	29.0%	27.5%	20.0%	27.0%
59	19.0%	19.0%	12.0%	9.0%	12.0%	28.0%	26.0%	20.0%	40.0%
60	19.0%	21.0%	12.0%	15.0%	14.0%	27.0%	29.0%	20.0%	25.0%
61	19.0%	25.0%	12.0%	9.0%	13.0%	26.0%	27.0%	20.0%	25.0%
62	28.0%	29.0%	18.0%	10.0%	15.0%	39.0%	36.0%	25.0%	31.0%
63	30.0%	28.0%	18.0%	11.0%	19.0%	33.0%	31.0%	25.0%	40.0%
64	25.0%	31.0%	18.0%	15.5%	17.0%	30.0%	30.0%	36.0%	40.0%
65	27.0%	31.0%	18.0%	15.5%	21.0%	32.0%	38.5%	38.0%	40.0%
66	35.0%	36.0%	18.0%	21.0%	25.0%	35.0%	44.0%	38.0%	100.0%
67	32.0%	33.0%	18.0%	18.0%	25.0%	31.0%	31.0%	38.0%	100.0%
68	21.0%	25.0%	18.0%	19.0%	18.0%	28.0%	30.0%	38.0%	100.0%
69	21.0%	27.0%	18.0%	14.0%	16.5%	20.0%	30.0%	38.0%	100.0%
70	21.0%	29.0%	18.0%	21.0%	22.0%	30.0%	32.0%	100.0%	100.0%
71	21.0%	34.0%	15.0%	24.0%	16.5%	25.0%	25.0%	100.0%	100.0%
72	21.0%	33.0%	15.0%	24.0%	17.0%	25.0%	25.0%	100.0%	100.0%
73	30.0%	24.0%	15.0%	24.0%	21.0%	25.0%	25.0%	100.0%	100.0%
74	30.0%	18.0%	15.0%	24.0%	14.0%	25.0%	25.0%	100.0%	100.0%
75	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

⁽¹⁾ Includes reduced retirements for Protective with 20+ years of service.

Reduced Retirement Pattern

Age	% Retiring Next Year						
	General		Executive & Elected	University		Public School	
	Males	Females		Males	Females	Males	Females
55	5.5%	6.0%	6.0%	3.3%	5.0%	12.0%	11.0%
56	6.5%	8.0%	6.0%	3.3%	5.0%	13.0%	13.0%
57	5.5%	6.0%	6.0%	4.0%	5.0%	13.0%	12.0%
58	5.5%	9.0%	6.0%	4.0%	5.5%	12.0%	13.0%
59	6.5%	7.5%	6.0%	4.4%	6.0%	14.3%	13.5%
60	9.0%	10.0%	6.0%	4.8%	7.5%	16.0%	17.0%
61	12.5%	11.0%	6.0%	4.8%	9.0%	16.0%	17.0%
62	16.0%	18.0%	6.0%	7.0%	11.0%	23.0%	24.0%
63	17.0%	19.5%	3.0%	8.3%	12.0%	21.0%	24.0%
64	21.0%	18.0%	3.0%	11.5%	14.5%	21.0%	24.0%

The assumed rates of separation from employment prior to service retirement due to disability and other causes are shown below for sample ages. All participants terminating prior to normal retirement age with less than 20 years of service are not eligible for sick leave program benefits.

Assumed Termination Rates by Attained Age and Years of Service

Age	Service	% of Active Participants Terminating								
		General		Executive & Elected	University		Public Schools		Protective	
		Males	Females		Males	Females	Males	Females	With Soc. Sec.	Without Soc. Sec.
	0-1	17.2%	19.5%	19.0%	14.0%	14.1%	12.6%	12.0%	18.8%	4.5%
	1-2	12.9%	15.5%	16.0%	13.8%	14.0%	11.6%	10.0%	15.5%	4.0%
	2-3	9.5%	12.5%	13.0%	12.6%	12.7%	8.5%	8.5%	10.5%	2.0%
	3-4	7.4%	10.0%	12.5%	11.0%	10.0%	6.0%	6.2%	6.5%	1.8%
	4-5	7.3%	8.7%	12.0%	8.6%	9.3%	5.6%	5.8%	5.5%	1.7%
	5-6	6.1%	7.8%	6.0%	8.5%	8.1%	4.5%	4.8%	5.0%	1.3%
	6-7	5.2%	6.9%	6.0%	7.0%	7.0%	3.7%	4.1%	4.5%	1.2%
	7-8	5.1%	6.0%	6.0%	5.6%	5.6%	2.9%	3.5%	4.0%	0.9%
	8-9	4.5%	5.6%	6.0%	4.6%	4.9%	2.6%	3.4%	3.5%	0.8%
	9-10	3.6%	5.5%	6.0%	4.3%	4.3%	2.5%	3.0%	3.3%	0.7%
30	10 & Over	3.1%	4.8%	4.5%	4.2%	4.0%	2.0%	2.2%	2.9%	0.7%
35		2.7%	3.9%	4.5%	4.0%	4.0%	1.6%	1.9%	2.4%	0.6%
40		2.6%	3.0%	4.5%	3.4%	3.7%	1.4%	1.6%	1.8%	0.6%
45		2.4%	2.7%	4.2%	2.8%	3.2%	1.4%	1.4%	1.4%	0.5%
50		1.9%	2.1%	3.7%	2.3%	2.7%	1.3%	1.2%	1.2%	0.5%
54		1.7%	1.8%	3.5%	2.2%	2.5%	1.3%	1.2%	1.2%	0.5%

Disability Rates

Age	% of Active Participants Becoming Disabled									
	General		Executive & Elected		University		Public Schools		Protective	
	Males	Females	Males	Females	Males	Females	Males	Females	With SS	W/O SS
20	0.01%	0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.02%	0.03%
25	0.01%	0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.02%	0.03%
30	0.01%	0.04%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.02%	0.03%
35	0.01%	0.05%	0.01%	0.01%	0.00%	0.03%	0.01%	0.01%	0.03%	0.03%
40	0.03%	0.07%	0.01%	0.01%	0.01%	0.04%	0.01%	0.02%	0.05%	0.05%
45	0.06%	0.10%	0.01%	0.01%	0.02%	0.04%	0.03%	0.05%	0.07%	0.10%
50	0.13%	0.16%	0.02%	0.02%	0.03%	0.07%	0.08%	0.10%	0.11%	0.55%
55	0.24%	0.29%	0.09%	0.09%	0.08%	0.11%	0.14%	0.14%	1.73%	0.41%
60	0.43%	0.41%	0.11%	0.11%	0.11%	0.17%	0.24%	0.21%	2.92%	0.12%



Miscellaneous and Technical Assumptions

Active Member Data:	Effective with the December 31, 2022 valuation, a standalone sick leave data extract was provided. Information for active members was used as received for the sick leave valuation. It was assumed that all active members would begin using sick leave credits to pay for retiree health care immediately upon becoming eligible to do so.
Decrement Operation:	Disability operates during the retirement pattern.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Election Percent Assumption:	It was assumed that 50% of future retirees would elect 1-person coverage and 50% would elect multiple-person coverage upon retirement.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and total service (in all benefit groups) nearest whole year on the date the decrement is assumed to occur.
Escrowed Liabilities:	The actuarial accrued liability for annuitants with a sick leave account balance and an account status of escrowed or on-hold provided in the data was calculated by drawing down each member's account balance using the same average net premiums applicable to active members. The present value was then multiplied by 50% to account for the assumption that only 50% of on-hold/escrowed retirees will, at some point, begin using their sick leave balance to pay for health care costs.
Liability Adjustments:	None
Missing Premiums:	For any active annuitants with a sick leave balance but no premium in the data, the average premiums were used to develop liabilities.
Terminated Vested Members Usage:	For purposes of developing the present value of future benefits for terminated vested members, it was assumed that 100% of the members would begin using their sick leave credits to cover health care costs immediately upon reaching eligibility to do so.
Unknown Gender:	For any members provided with an unknown gender, the member was assumed to be female.

SECTION I

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 74 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total OPEB 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 OPEB 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 OPEB plan investments is 6.80%; the municipal bond rate is 4.05%; and the resulting SDR is 6.80%.

Administrative expenses were not included in the SDR projection.

The tables in this section provide background for the development of the SDR.

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 0.2% contribution rate for the first year was developed from the 2021 actuarial valuation and the second year 0.2% contribution rate was developed from the 2022 actuarial valuation.

The **Projection of 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 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 Ending December 31, 2122

Year	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
1	\$ 0	\$ 11,042,147	\$ 0	\$ 11,042,147
2	0	10,554,675	0	10,554,675
3	0	16,157,647	0	16,157,647
4	0	15,598,937	0	15,598,937
5	0	15,088,160	0	15,088,160
6	0	14,610,733	0	14,610,733
7	0	14,157,058	0	14,157,058
8	0	13,719,442	0	13,719,442
9	0	13,292,285	0	13,292,285
10	0	12,870,514	0	12,870,514
11	0	12,451,354	0	12,451,354
12	0	12,028,722	0	12,028,722
13	0	11,596,029	0	11,596,029
14	0	11,153,319	0	11,153,319
15	0	10,702,055	0	10,702,055
16	0	10,241,215	0	10,241,215
17	0	9,770,530	0	9,770,530
18	0	9,288,747	0	9,288,747
19	0	8,794,289	0	8,794,289
20	0	8,285,238	0	8,285,238
21	0	7,759,094	0	7,759,094
22	0	7,218,246	0	7,218,246
23	0	6,668,881	0	6,668,881
24	0	6,116,247	0	6,116,247
25	0	5,564,204	0	5,564,204
26	0	5,016,556	0	5,016,556
27	0	4,478,696	0	4,478,696
28	0	3,956,035	0	3,956,035
29	0	3,452,179	0	3,452,179
30	0	2,967,759	0	2,967,759
31	0	2,514,396	0	2,514,396
32	0	2,106,088	0	2,106,088
33	0	1,743,606	0	1,743,606
34	0	1,424,131	0	1,424,131
35	0	1,147,718	0	1,147,718
36	0	913,683	0	913,683
37	0	719,042	0	719,042
38	0	559,403	0	559,403
39	0	429,287	0	429,287
40	0	324,835	0	324,835
41	0	242,407	0	242,407
42	0	179,055	0	179,055
43	0	130,849	0	130,849
44	0	94,461	0	94,461
45	0	67,787	0	67,787
46	0	48,137	0	48,137
47	0	33,674	0	33,674
48	0	23,061	0	23,061
49	0	15,123	0	15,123
50	0	9,453	0	9,453



Single Discount Rate Development Projection of Contributions Ending December 31, 2122 (Concluded)

Year	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
51	\$ 0	\$ 5,449	\$ 0	\$ 5,449
52	0	2,604	0	2,604
53	0	902	0	902
54	0	233	0	233
55	0	96	0	96
56	0	34	0	34
57	0	5	0	5
58	0	0	0	0
59	0	0	0	0
60	0	0	0	0
61	0	0	0	0
62	0	0	0	0
63	0	0	0	0
64	0	0	0	0
65	0	0	0	0
66	0	0	0	0
67	0	0	0	0
68	0	0	0	0
69	0	0	0	0
70	0	0	0	0
71	0	0	0	0
72	0	0	0	0
73	0	0	0	0
74	0	0	0	0
75	0	0	0	0
76	0	0	0	0
77	0	0	0	0
78	0	0	0	0
79	0	0	0	0
80	0	0	0	0
81	0	0	0	0
82	0	0	0	0
83	0	0	0	0
84	0	0	0	0
85	0	0	0	0
86	0	0	0	0
87	0	0	0	0
88	0	0	0	0
89	0	0	0	0
90	0	0	0	0
91	0	0	0	0
92	0	0	0	0
93	0	0	0	0
94	0	0	0	0
95	0	0	0	0
96	0	0	0	0
97	0	0	0	0
98	0	0	0	0
99	0	0	0	0
100	0	0	0	0



Single Discount Rate Development Projection of Plan Fiduciary Net Position Ending December 31, 2122

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 6.80%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
1	\$ 1,148,788,252	\$ 11,042,147	\$ 58,714,222	\$ 76,523,406	\$ 1,177,639,583
2	1,177,639,583	10,554,675	64,246,606	78,283,988	1,202,231,640
3	1,202,231,640	16,157,647	69,886,559	79,955,011	1,228,457,739
4	1,228,457,739	15,598,937	73,881,512	81,586,107	1,251,761,272
5	1,251,761,272	15,088,160	76,643,801	83,061,293	1,273,266,925
6	1,273,266,925	14,610,733	79,430,640	84,414,518	1,292,861,536
7	1,292,861,536	14,157,058	81,576,144	85,660,033	1,311,102,483
8	1,311,102,483	13,719,442	83,937,652	86,806,812	1,327,691,085
9	1,327,691,085	13,292,285	85,875,764	87,855,740	1,342,963,347
10	1,342,963,347	12,870,514	87,592,702	88,822,734	1,357,063,892
11	1,357,063,892	12,451,354	88,838,302	89,725,900	1,370,402,845
12	1,370,402,845	12,028,722	89,844,266	90,585,175	1,383,172,477
13	1,383,172,477	11,596,029	90,983,649	91,400,939	1,395,185,795
14	1,395,185,795	11,153,319	92,409,522	92,155,357	1,406,084,950
15	1,406,084,950	10,702,055	94,277,165	92,818,953	1,415,328,793
16	1,415,328,793	10,241,215	96,471,778	93,358,734	1,422,456,964
17	1,422,456,964	9,770,530	98,498,866	93,759,922	1,427,488,551
18	1,427,488,551	9,288,747	101,274,688	93,993,133	1,429,495,742
19	1,429,495,742	8,794,289	103,632,143	94,034,252	1,428,692,140
20	1,428,692,140	8,285,238	105,428,792	93,902,502	1,425,451,088
21	1,425,451,088	7,759,094	107,542,458	93,593,833	1,419,261,556
22	1,419,261,556	7,218,246	109,861,110	93,077,321	1,409,696,014
23	1,409,696,014	6,668,881	112,093,142	92,333,852	1,396,605,605
24	1,396,605,605	6,116,247	114,326,080	91,350,552	1,379,746,324
25	1,379,746,324	5,564,204	116,404,214	90,116,165	1,359,022,479
26	1,359,022,479	5,016,556	118,416,951	88,621,322	1,334,243,407
27	1,334,243,407	4,478,696	120,107,386	86,861,830	1,305,476,548
28	1,305,476,548	3,956,035	120,972,638	84,859,270	1,273,319,215
29	1,273,319,215	3,452,179	121,353,046	82,643,001	1,238,061,349
30	1,238,061,349	2,967,759	121,366,670	80,228,811	1,199,891,249
31	1,199,891,249	2,514,396	120,935,703	77,632,495	1,159,102,438
32	1,159,102,438	2,106,088	120,757,835	74,851,150	1,115,301,841
33	1,115,301,841	1,743,606	120,757,746	71,860,591	1,068,148,292
34	1,068,148,292	1,424,131	120,453,065	68,653,655	1,017,773,013
35	1,017,773,013	1,147,718	119,635,774	65,246,223	964,531,179
36	964,531,179	913,683	117,946,707	61,674,436	909,172,591
37	909,172,591	719,042	115,568,299	57,983,079	852,306,413
38	852,306,413	559,403	112,655,544	54,208,245	794,418,518
39	794,418,518	429,287	108,657,889	50,401,202	736,591,118
40	736,591,118	324,835	103,503,603	46,637,810	680,050,160
41	680,050,160	242,407	97,644,711	42,986,195	625,634,050
42	625,634,050	179,055	91,322,211	39,495,210	573,986,105
43	573,986,105	130,849	85,492,443	36,176,491	524,801,002
44	524,801,002	94,461	80,509,257	32,997,329	477,383,535
45	477,383,535	67,787	76,074,663	29,920,346	431,297,004
46	431,297,004	48,137	71,479,162	26,939,482	386,805,462
47	386,805,462	33,674	66,326,484	24,085,883	344,598,535
48	344,598,535	23,061	61,052,120	21,391,836	304,961,312
49	304,961,312	15,123	55,661,421	18,876,509	268,191,524
50	268,191,524	9,453	50,358,966	16,553,293	234,395,303



Single Discount Rate Development Projection of Plan Fiduciary Net Position Ending December 31, 2122 (Concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 6.80%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
51	\$ 234,395,303	\$ 5,449	\$ 45,346,903	\$ 14,422,624	\$ 203,476,472
52	203,476,472	2,604	40,585,507	12,479,273	175,372,842
53	175,372,842	902	36,195,857	10,714,963	149,892,851
54	149,892,851	233	32,132,582	9,118,181	126,878,682
55	126,878,682	96	28,268,871	7,682,418	106,292,326
56	106,292,326	34	24,660,862	6,403,199	88,034,697
57	88,034,697	5	21,292,972	5,274,304	72,016,034
58	72,016,034	0	18,166,020	4,289,603	58,139,617
59	58,139,617	0	15,290,658	3,442,161	46,291,120
60	46,291,120	0	12,684,798	2,723,606	36,329,928
61	36,329,928	0	10,368,511	2,123,703	28,085,120
62	28,085,120	0	8,345,793	1,630,698	21,370,025
63	21,370,025	0	6,619,971	1,231,784	15,981,838
64	15,981,838	0	5,168,900	913,913	11,726,851
65	11,726,851	0	3,969,311	664,689	8,422,228
66	8,422,228	0	2,990,123	472,719	5,904,824
67	5,904,824	0	2,201,020	327,924	4,031,729
68	4,031,729	0	1,581,513	221,270	2,671,486
69	2,671,486	0	1,105,527	144,691	1,710,650
70	1,710,650	0	748,517	91,293	1,053,426
71	1,053,426	0	487,505	55,330	621,252
72	621,252	0	303,150	32,108	350,209
73	350,209	0	178,822	17,834	189,222
74	189,222	0	100,577	9,504	98,148
75	98,148	0	54,152	4,863	48,859
76	48,859	0	27,776	2,394	23,477
77	23,477	0	13,825	1,134	10,786
78	10,786	0	6,627	512	4,671
79	4,671	0	2,943	219	1,947
80	1,947	0	1,226	91	813
81	813	0	528	38	322
82	322	0	214	15	123
83	123	0	78	6	51
84	51	0	30	2	23
85	23	0	13	1	11
86	11	0	5	1	7
87	7	0	2	0	5
88	5	0	1	0	5
89	5	0	0	0	5
90	5	0	0	0	5
91	5	0	0	0	6
92	6	0	0	0	6
93	6	0	0	0	7
94	7	0	0	0	7
95	7	0	0	0	7
96	7	0	0	1	8
97	8	0	0	1	9
98	9	0	0	1	9
99	9	0	0	1	10
100	10	0	0	1	10



Single Discount Rate Development

Present Values of Projected Benefits

Ending December 31, 2122

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 (a)-.5	(g)=(e)*vf ^a (a)-.5	(h)=(c)/(1+SDR) ^a (a)-.5
1	\$ 1,148,788,252	\$ 58,714,222	\$ 58,714,222	\$ 0	\$ 56,814,303	\$ 0	\$ 56,814,303
2	1,177,639,583	64,246,606	64,246,606	0	58,209,425	0	58,209,425
3	1,202,231,640	69,886,559	69,886,559	0	59,287,826	0	59,287,826
4	1,228,457,739	73,881,512	73,881,512	0	58,686,254	0	58,686,254
5	1,251,761,272	76,643,801	76,643,801	0	57,004,140	0	57,004,140
6	1,273,266,925	79,430,640	79,430,640	0	55,315,415	0	55,315,415
7	1,292,861,536	81,576,144	81,576,144	0	53,192,454	0	53,192,454
8	1,311,102,483	83,937,652	83,937,652	0	51,247,469	0	51,247,469
9	1,327,691,085	85,875,764	85,875,764	0	49,092,479	0	49,092,479
10	1,342,963,347	87,592,702	87,592,702	0	46,885,767	0	46,885,767
11	1,357,063,892	88,838,302	88,838,302	0	44,524,812	0	44,524,812
12	1,370,402,845	89,844,266	89,844,266	0	42,161,976	0	42,161,976
13	1,383,172,477	90,983,649	90,983,649	0	39,978,150	0	39,978,150
14	1,395,185,795	92,409,522	92,409,522	0	38,019,361	0	38,019,361
15	1,406,084,950	94,277,165	94,277,165	0	36,318,119	0	36,318,119
16	1,415,328,793	96,471,778	96,471,778	0	34,797,326	0	34,797,326
17	1,422,456,964	98,498,866	98,498,866	0	33,266,381	0	33,266,381
18	1,427,488,551	101,274,688	101,274,688	0	32,026,095	0	32,026,095
19	1,429,495,742	103,632,143	103,632,143	0	30,685,012	0	30,685,012
20	1,428,692,140	105,428,792	105,428,792	0	29,229,393	0	29,229,393
21	1,425,451,088	107,542,458	107,542,458	0	27,917,034	0	27,917,034
22	1,419,261,556	109,861,110	109,861,110	0	26,703,122	0	26,703,122
23	1,409,696,014	112,093,142	112,093,142	0	25,510,905	0	25,510,905
24	1,396,605,605	114,326,080	114,326,080	0	24,362,445	0	24,362,445
25	1,379,746,324	116,404,214	116,404,214	0	23,225,925	0	23,225,925
26	1,359,022,479	118,416,951	118,416,951	0	22,123,148	0	22,123,148
27	1,334,243,407	120,107,386	120,107,386	0	21,010,264	0	21,010,264
28	1,305,476,548	120,972,638	120,972,638	0	19,814,253	0	19,814,253
29	1,273,319,215	121,353,046	121,353,046	0	18,611,012	0	18,611,012
30	1,238,061,349	121,366,670	121,366,670	0	17,427,997	0	17,427,997
31	1,199,891,249	120,935,703	120,935,703	0	16,260,404	0	16,260,404
32	1,159,102,438	120,757,835	120,757,835	0	15,202,705	0	15,202,705
33	1,115,301,841	120,757,746	120,757,746	0	14,234,732	0	14,234,732
34	1,068,148,292	120,453,065	120,453,065	0	13,294,772	0	13,294,772
35	1,017,773,013	119,635,774	119,635,774	0	12,363,825	0	12,363,825
36	964,531,179	117,946,707	117,946,707	0	11,413,172	0	11,413,172
37	909,172,591	115,568,299	115,568,299	0	10,470,996	0	10,470,996
38	852,306,413	112,655,544	112,655,544	0	9,557,198	0	9,557,198
39	794,418,518	108,657,889	108,657,889	0	8,631,137	0	8,631,137
40	736,591,118	103,503,603	103,503,603	0	7,698,232	0	7,698,232
41	680,050,160	97,644,711	97,644,711	0	6,800,064	0	6,800,064
42	625,634,050	91,322,211	91,322,211	0	5,954,831	0	5,954,831
43	573,986,105	85,492,443	85,492,443	0	5,219,747	0	5,219,747
44	524,801,002	80,509,257	80,509,257	0	4,602,527	0	4,602,527
45	477,383,535	76,074,663	76,074,663	0	4,072,108	0	4,072,108
46	431,297,004	71,479,162	71,479,162	0	3,582,510	0	3,582,510
47	386,805,462	66,326,484	66,326,484	0	3,112,603	0	3,112,603
48	344,598,535	61,052,120	61,052,120	0	2,682,664	0	2,682,664
49	304,961,312	55,661,421	55,661,421	0	2,290,069	0	2,290,069
50	268,191,524	50,358,966	50,358,966	0	1,939,991	0	1,939,991



Single Discount Rate Development

Present Values of Projected Benefits

Ending December 31, 2122 (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^(a-.5)	(g)=(e)*vf^(a-.5)	(h)=(c)/(1+SDR)^(a-.5)
51	\$ 234,395,303	\$ 45,346,903	\$ 45,346,903	\$ 0	\$ 1,635,684	\$ 0	\$ 1,635,684
52	203,476,472	40,585,507	40,585,507	0	1,370,729	0	1,370,729
53	175,372,842	36,195,857	36,195,857	0	1,144,638	0	1,144,638
54	149,892,851	32,132,582	32,132,582	0	951,445	0	951,445
55	126,878,682	28,268,871	28,268,871	0	783,746	0	783,746
56	106,292,326	24,660,862	24,660,862	0	640,182	0	640,182
57	88,034,697	21,292,972	21,292,972	0	517,560	0	517,560
58	72,016,034	18,166,020	18,166,020	0	413,440	0	413,440
59	58,139,617	15,290,658	15,290,658	0	325,843	0	325,843
60	46,291,120	12,684,798	12,684,798	0	253,101	0	253,101
61	36,329,928	10,368,511	10,368,511	0	193,712	0	193,712
62	28,085,120	8,345,793	8,345,793	0	145,994	0	145,994
63	21,370,025	6,619,971	6,619,971	0	108,431	0	108,431
64	15,981,838	5,168,900	5,168,900	0	79,273	0	79,273
65	11,726,851	3,969,311	3,969,311	0	56,999	0	56,999
66	8,422,228	2,990,123	2,990,123	0	40,204	0	40,204
67	5,904,824	2,201,020	2,201,020	0	27,710	0	27,710
68	4,031,729	1,581,513	1,581,513	0	18,643	0	18,643
69	2,671,486	1,105,527	1,105,527	0	12,202	0	12,202
70	1,710,650	748,517	748,517	0	7,736	0	7,736
71	1,053,426	487,505	487,505	0	4,717	0	4,717
72	621,252	303,150	303,150	0	2,747	0	2,747
73	350,209	178,822	178,822	0	1,517	0	1,517
74	189,222	100,577	100,577	0	799	0	799
75	98,148	54,152	54,152	0	403	0	403
76	48,859	27,776	27,776	0	193	0	193
77	23,477	13,825	13,825	0	90	0	90
78	10,786	6,627	6,627	0	40	0	40
79	4,671	2,943	2,943	0	17	0	17
80	1,947	1,226	1,226	0	7	0	7
81	813	528	528	0	3	0	3
82	322	214	214	0	1	0	1
83	123	78	78	0	0	0	0
84	51	30	30	0	0	0	0
85	23	13	13	0	0	0	0
86	11	5	5	0	0	0	0
87	7	2	2	0	0	0	0
88	5	1	1	0	0	0	0
89	5	0	0	0	0	0	0
90	5	0	0	0	0	0	0
91	5	0	0	0	0	0	0
92	6	0	0	0	0	0	0
93	6	0	0	0	0	0	0
94	7	0	0	0	0	0	0
95	7	0	0	0	0	0	0
96	7	0	0	0	0	0	0
97	8	0	0	0	0	0	0
98	9	0	0	0	0	0	0
99	9	0	0	0	0	0	0
100	10	0	0	0	0	0	0
Totals					\$ 1,301,570,353	\$ 0	\$ 1,301,570,353



SECTION J

GLOSSARY OF TERMS

Glossary of Terms

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

Glossary of Terms

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)	A calculated contribution into an OPEB 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.
Amortization Method	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (cost-sharing OPEB plan)	A multiple-employer defined benefit OPEB plan in which the OPEB obligations to the employees of more than one employer are pooled and OPEB plan assets can be used to pay the benefits of the employees of any employer that provides benefits through the OPEB plan.
Covered-Employee Payroll	The payroll of employees that are provided with benefits through the OPEB plan.
Deferred Inflows and Outflows	The deferred inflows and outflows of OPEB resources are amounts used under GASB Statement No. 75 in developing the annual OPEB expense/(revenue). Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in the OPEB expense/(revenue) 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: <ol style="list-style-type: none">1. The benefit payments to be made while the OPEB plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Glossary of Terms

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 age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

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.

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. 74, the money-weighted rate of return is calculated as the internal rate of return on OPEB plan investments, net of OPEB plan investment expense.

Multiple-Employer Defined Benefit OPEB Plan

A multiple-employer plan is a defined benefit OPEB plan that is used to provide OPEB payments 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 OPEB Liability (NOL)

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

Non-Employer Contributing Entities

Non-employer contributing entities are entities that make contributions to an OPEB plan that is used to provide OPEB payments to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.

Glossary of Terms

Normal Cost	The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.
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 health care 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 OPEB Expense/(Revenue)	The total OPEB expense/(revenue) is the sum of the following items that are recognized at the end of the employer's fiscal year: <ol style="list-style-type: none">1. Service Cost2. Interest on the Total OPEB Liability3. Current-Period Benefit Changes4. Employee Contributions (made negative for addition here)5. Projected Earnings on Plan Investments (made negative for addition here)6. OPEB Plan Administrative Expense7. Other Changes in Plan Fiduciary Net Position8. Recognition of Outflow (Inflow) of Resources due to Liabilities9. Recognition of Outflow (Inflow) of Resources due to Assets
Total OPEB Liability (TOL)	The TOL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
Unfunded Actuarial Accrued Liability (UAAL)	The UAAL is the difference between actuarial accrued liability and valuation assets.
Valuation Assets	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 74 and 75, the valuation assets are equal to the market value of assets.