

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, 2020





July 9, 2021

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, 2020, 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.

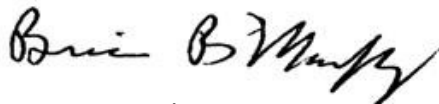
This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the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

Brian B. Murphy, Mark Buis, and James D. Anderson 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.

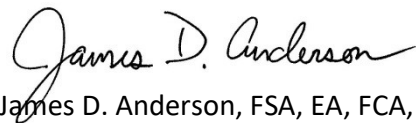
Respectfully submitted,



Brian B. Murphy, FSA, EA, FCA, MAAA, PhD



Mark Buis, FSA, EA, FCA, MAAA



James D. Anderson, FSA, EA, FCA, MAAA

BBM/MB/JDA:sc

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.



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SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2020

Actuarial Valuation Date December 31, 2020
 SHICC Program's Fiscal Year Ending Date (Measurement Date & Reporting Date) December 31, 2020

Membership⁽¹⁾

Number of	
- Retirees and Beneficiaries	21,313
- Inactive, Nonretired Members	335
- Active Members	74,099
- Total	95,747
Covered Payroll ⁽²⁾	\$ 5,018,527,271

Net OPEB Liability/(Asset)

Total OPEB Liability	\$ 924,015,740
Plan Fiduciary Net Position	1,208,791,207
Net OPEB Liability/(Asset)	\$ (284,775,467)
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	130.82 %
Net OPEB Liability/(Asset) as a Percentage of Covered Payroll	(5.67)%

Development of the Single Discount Rate

Single Discount Rate	7.00 %
Long-Term Municipal Bond Rate ⁽³⁾	2.00 %

Total OPEB Expense/(Revenue) \$ (36,608,296)

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	\$ 130,243,247
Changes in assumptions	16,928,913	0
Net difference between projected and actual earnings on OPEB plan investments	0	109,298,648
Total	\$ 16,928,913	\$ 239,541,895

- ⁽¹⁾ Inactive number counts include only those members with a SHICC account balance. The retirees and beneficiaries count decreased from the prior valuation in part due to a revision in our understanding of the data. Namely, retirees and beneficiaries with an account status of "closed" were excluded.
- ⁽²⁾ Covered payroll is for 2020 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 31, 2020. 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 postemployment (OPEB) benefit plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 74, "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans," replaces the requirements of GASB Statement No. 43, "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans." Similarly, 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, 2020.

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 7.00% 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 2120. 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, 2020 and a measurement date of December 31, 2020.



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 7.00%; the municipal bond rate is 2.00% (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%.

Actuarial Assumptions

The actuarial assumptions used to value the liabilities are outlined in detail in Section H. The assumptions include details on the healthcare trend assumption, the aging factors, as well as the cost method used to develop the OPEB expense/(revenue). Other demographic and economic assumptions were based on the experience study covering the three-year period ending December 31, 2017 conducted for the Retirement System.

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, 2020

A. Expense

1. Service Cost	\$	24,092,160
2. Interest on the Total OPEB Liability		64,393,209
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)		(74,679,130)
6. OPEB Plan Administrative Expense		639,658
7. Other Changes in Plan Fiduciary Net Position		0
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		(17,190,673)
9. Recognition of Outflow (Inflow) of Resources due to Assets		(33,863,520)
10. Total OPEB Expense/(Revenue)	\$	(36,608,296)

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 845,169 years. Additionally, the total plan membership (active employees and inactive employees) was 98,270. 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 8.6005 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, 2020

A. Outflows (Inflows) of Resources Due to Liabilities

1. Difference between expected and actual experience of the Total OPEB Liability (gains) or losses	\$ (47,585,575)
2. Assumption Changes (gains) or losses	\$ 0
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	8.6005
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	\$ (5,532,885)
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	\$ (5,532,885)
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	\$ (42,052,690)
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	\$ (42,052,690)

B. Outflows (Inflows) of Resources Due to Assets

1. Net difference between projected and actual earnings on OPEB plan investments (gains) or losses	\$ (84,788,000)
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	\$ (16,957,600)
4. Deferred Outflow (Inflow) of Resources to be recognized in future OPEB expenses/(revenues) due to Assets	\$ (67,830,400)



Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended December 31, 2020

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	\$ 19,940,838	\$ (19,940,838)
2. Assumption changes	2,750,165	0	2,750,165
3. Net difference between projected and actual earnings on OPEB plan investments	0	33,863,520	(33,863,520)
4. Total	\$ 2,750,165	\$ 53,804,358	\$ (51,054,193)

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	\$ 130,243,247	\$ (130,243,247)
2. Assumption changes	16,928,913	0	16,928,913
3. Net difference between projected and actual earnings on OPEB plan investments	0	109,298,648	(109,298,648)
4. Total	\$ 16,928,913	\$ 239,541,895	\$ (222,612,982)

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
2021	\$ (51,054,193)
2022	(35,586,521)
2023	(57,272,353)
2024	(34,148,273)
2025	(17,190,673)
2026	(14,353,322)
2027	(9,685,152)
2028	(3,322,495)
2029	0
2030	0
Thereafter	0
Total	\$ (222,612,982)



Recognition of Deferred Outflows and Inflows of Resources

Fiscal Year Ended December 31, 2020

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)	\$ (17,840,521)	5.1767
2018	(41,561,731)	9.1556	(4,539,487)	(27,943,270)	6.1556
2019	(55,251,074)	8.6032	(6,422,154)	(42,406,766)	6.6032
2020	(47,585,575)	8.6005	(5,532,885)	(42,052,690)	7.6005
Total			\$ (19,940,838)	\$ (130,243,247)	
Deferred Outflow (Inflow) Due to Assumption Changes					
2017	\$ 0	9.1767	\$ 0	\$ 0	5.1767
2018	25,179,408	9.1556	2,750,165	16,928,913	6.1556
2019	0	8.6032	0	0	6.6032
2020	0	8.6005	0	0	7.6005
Total			\$ 2,750,165	\$ 16,928,913	
Deferred Outflow (Inflow) Due to Differences Between Projected and Actual Earnings on Plan Investments					
2017	\$ (77,338,355)	5.0000	\$ (15,467,671)	\$ (15,467,671)	1.0000
2018	108,429,156	5.0000	21,685,831	43,371,663	2.0000
2019	(115,620,400)	5.0000	(23,124,080)	(69,372,240)	3.0000
2020	(84,788,000)	5.0000	(16,957,600)	(67,830,400)	4.0000
Total			\$ (33,863,520)	\$ (109,298,648)	

Statement of Fiduciary Net Position as of December 31, 2020

	2020
Assets	
Cash and Deposits	\$ 4,137,719
Receivables	
Contributions	\$ 1,502,215
Accounts Receivable - Due From Other Benefit Programs	768,983
Total Receivables	\$ 2,271,198
Investments	
Investment in Core Fund	\$ 1,202,976,218
Total Investments	\$ 1,202,976,218
Total Assets	\$ 1,209,385,135
 Liabilities	
Payables	
Accounts Payable - Due to Other Benefit Programs	\$ 588,408
Total Liabilities	\$ 593,928
 Net Position Restricted for OPEB	\$ 1,208,791,207

Statement of Changes in Fiduciary Net Position for Year Ended December 31, 2020

	2020
Additions	
Contributions	
Employer	\$ 15,080,311
Total Contributions	\$ 15,080,311
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 159,467,130
Net Investment Income	\$ 159,467,130
Total Additions	\$ 174,547,441
 Deductions	
Benefit Payments	\$ 49,481,918
OPEB Plan Administrative Expense	639,658
Total Deductions	\$ 50,121,576
Net Increase in Net Position	\$ 124,425,865
 Net Position Restricted for OPEB	
Beginning of Year	\$ 1,084,365,342
End of Year	\$ 1,208,791,207

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, 2020

A. Total OPEB Liability	
1. Service cost	\$ 24,092,160
2. Interest on the Total OPEB Liability	64,393,209
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total OPEB Liability	(47,585,575)
5. Changes of assumptions	0
6. Benefit payments	(49,481,918)
7. Net change in Total OPEB Liability	(8,582,124)
8. Total OPEB Liability – Beginning	932,597,864
9. Total OPEB Liability – Ending	\$ 924,015,740
B. Plan Fiduciary Net Position	
1. Contributions – employer	\$ 15,080,311
2. Contributions – nonemployer contributing entities	0
3. Contributions – employee	0
4. Net investment income	159,467,130
5. Benefit payments	(49,481,918)
6. OPEB plan administrative expense	(639,658)
7. Other	0
8. Net change in Plan Fiduciary Net Position	124,425,865
9. Plan Fiduciary Net Position – Beginning	1,084,365,342
10. Plan Fiduciary Net Position – Ending	\$ 1,208,791,207
C. Net OPEB Liability/(Asset)	\$ (284,775,467)
D. Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	130.82 %
E. Covered payroll⁽¹⁾	\$ 5,018,527,271
F. Net OPEB Liability/(Asset) as a percentage of covered-employee payroll	(5.67)%

⁽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,	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Total OPEB Liability										
Service cost	\$ 24,092,160	\$ 25,480,349	\$ 23,419,279	\$ 23,090,058						
Interest on the Total OPEB Liability	64,393,209	65,525,451	65,968,930	65,855,518						
Changes of benefit terms	0	0	0	0						
Difference between expected and actual experience	(47,585,575)	(55,251,074)	(41,561,731)	(31,625,769)						
Changes of assumptions	0	0	25,179,408	0						
Benefit payments	(49,481,918)	(52,989,110)	(55,398,266)	(56,420,238)						
Net change in Total OPEB Liability	(8,582,124)	(17,234,384)	17,607,620	899,569						
Total OPEB Liability - Beginning	932,597,864	949,832,248	932,224,628	931,325,059						
Total OPEB Liability - Ending (a)	\$ 924,015,740	\$ 932,597,864	\$ 949,832,248	\$ 932,224,628						
Plan Fiduciary Net Position										
Employer contributions	\$ 15,080,311	\$ 14,368,898	\$ 18,207,993	\$ 17,864,218						
Nonemployer contributing entities contributions	0	0	0	0						
Employee contributions	0	0	0	0						
OPEB plan net investment income	159,467,130	180,270,630	(36,549,391)	141,758,344						
Benefit payments	(49,481,918)	(52,989,110)	(55,398,266)	(56,420,238)						
OPEB plan administrative expense	(639,658)	(339,791)	(261,661)	(292,733)						
Other	0	0	0	0						
Net change in Plan Fiduciary Net Position	124,425,865	141,310,627	(74,001,325)	102,909,591						
Plan Fiduciary Net Position - Beginning	1,084,365,342	943,054,715	1,017,056,040	914,146,449						
Plan Fiduciary Net Position - Ending (b)	\$ 1,208,791,207	\$ 1,084,365,342	\$ 943,054,715	\$ 1,017,056,040						
Net OPEB Liability/(Asset) - ending (a) - (b)	\$ (284,775,467)	\$ (151,767,478)	\$ 6,777,533	\$ (84,831,412)						
Plan Fiduciary Net Position as a percentage of Total OPEB Liability	130.82 %	116.27 %	99.29 %	109.10 %						
Covered payroll⁽¹⁾	\$ 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	(5.67)%	(3.16)%	0.15 %	(1.90)%						

Notes to Schedule:

⁽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
2011						
2012						
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)%

⁽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
2011					
2012					
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 %

⁽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, 2020*:

Actuarial Cost Method	Frozen Initial Liability
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	7 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, 2018 actuarial valuation.

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 %

⁽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, 2020, 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>
Equities	51.00%	4.70%
Fixed Income	25.00%	0.80%
Inflation Sens. Assets	16.00%	- 0.40%
Real Estate	8.00%	3.10%
Private Equity/Debt	11.00%	7.60%
Multi-asset	4.00%	3.30%
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 2.4%.

Single Discount Rate

A Single Discount Rate of 7.00% 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 7.00%. 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:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	21,313
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	335
Active Plan Members	<u>74,099</u>
Total Plan Members	95,747

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 7.00%, 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 6.00%	Rate Assumption 7.00%	1% Increase 8.00%
Total OPEB Liability	\$ 1,017,986,991	\$ 924,015,740	\$ 842,854,844
Plan Fiduciary Net Position	1,208,791,207	1,208,791,207	1,208,791,207
Net OPEB Liability/(Asset)	\$ (190,804,216)	\$ (284,775,467)	\$ (365,936,363)

Regarding the sensitivity of the net OPEB liability/(asset) to changes in the healthcare 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 Healthcare Cost Trend Rate Assumption

Healthcare Cost Trend Rate	Current Healthcare Cost		
	1% Decrease	Trend Rate Assumption	1% Increase
Total OPEB Liability	\$ 854,336,330	\$ 924,015,740	\$ 991,518,661
Plan Fiduciary Net Position	1,208,791,207	1,208,791,207	1,208,791,207
Net OPEB Liability/(Asset)	\$ (354,454,877)	\$ (284,775,467)	\$ (217,272,546)

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 using sick leave at the same rate as in the past but not less than 25% nor more than 75% of the person's annual accrual rate (usually 16.25 days). For any members who did not have an accrual rate in the data provided, an assumed accrual rate of 16.25 days per year was used for non-University members and 9.00 days per year was used for University members.

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 Base 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 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.

Base 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 & Beneficiaries

	Rate Category		
	Total	Pre-65	Post-65
1. Number*	18,106	4,171	13,935
2. Monthly Premium Amounts for Retirees Currently in Pay Status*	\$ 13,179,921	\$5,250,009	\$7,929,912
3. Annual Premiums for Retirees Currently in Pay Status: (2)x12	\$158,159,052		
4. Reported Premiums from Financial Statements	\$156,004,006		
5. Ratio of Reported to Annualized Premium Amounts: (4)/(3) not less than 1	1.0		
6. Adjusted Monthly Premiums: (2)/(1)x(5)		\$ 1,258.69	\$ 569.06
First Prior Year		\$ 1,331.31	\$ 603.99
Second Prior Year		\$ 1,227.59	\$ 663.64

* Retirees with an account status of active and a premium amount populated in the data provided (some of whom have exhausted their sick leave credits). Excludes pre-65 retirees currently enrolled in a Medicare health care plan. These members were excluded from the average premium calculation because the averages are used to project future premiums of people not covered by Medicare. The number counts above were used strictly for developing average premiums and may be different from retiree counts shown throughout this report.

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 under age 65, they were assumed to convert to the average post-65 premium upon attainment of age 65 pro-rated for the ratio of their pre-65 premium to the average pre-65 premium. For non-retired members, the average projected pre-65 premium was applied to age 65 and the average projected post-65 premium was applied after age 65.

SECTION G

SUMMARY OF PARTICIPANT DATA

Summary of Participant Data

Active Participants

	State Employees			
	(Non-University)	University	University Hospital	Total
Number	33,220	31,347	9,532	74,099
Annual Payroll	\$2,053,388,106	\$ 2,394,918,114	\$655,053,085	\$ 5,103,359,305
Accrued Unused Sick Days	2,727,926 days	2,810,532 days	364,619 days	5,903,077 days
Averages: Age	44.7 years	46.2 years	40.5 years	44.8 years
Service	11.4 years	10.7 years	7.9 years	10.6 years
Sick Leave Days	82.1 days	89.7 days	38.3 days	79.7 days

Terminated Vested Participants

Number	ASLCC Sick Leave Balance	SHICC Sick Leave Balance	Total Sick Leave Balance
423	\$17,193,204	\$11,014,908	\$28,208,112

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.

Retirees and Beneficiaries Provided by ETF

Status	Number	ASLCC Sick Leave Balance	SHICC Sick Leave Balance	Total Sick Leave Balance
Annuitants Actively Using Sick Leave Credits	17,979	\$609,822,789	\$ 988,055,617	\$1,597,878,406
Escrowed/On-Hold Annuitants	5,804	262,195,771	190,539,606	452,735,377
Total	23,783	\$872,018,560	\$1,178,595,223	\$2,050,613,783

In addition to the counts above, an additional 15,857 annuitants were excluded from the valuation due to having an account status of closed or being reported with 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**
- 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 2015-2017.

The long-term rates of investment return used in making the valuation was 7.0% 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 2.5%.

Trend Rate. The adjusted premiums shown on page 22 were the basis for the development of liabilities for both the ASLCC and SHICC programs. An increase of 10% was applied to those premiums to account for secular trend, aging, etc. In addition, premiums were assumed to increase 3.0% in each future year. Because of the nature of this program and the objectives of this report, a more refined development of aging and trend assumptions was not deemed appropriate.

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:

Service	% Merit and Longevity Increase Next Year					
	General	Exec. & Elec.	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 Wisconsin 2018 Mortality Table adopted by the Board in connection with the 2015-2017 Experience Study. The rates in this table were based on actual WRS experience adjusted for future mortality improvements using the MP-2018 fully generational improvement scale. In accordance with the experience study's in-depth review of Wisconsin-specific mortality experience, the MP-2018 fully generational improvement scale was multiplied by a 60% factor. This approach will be reviewed in the next experience study covering 2018-2020. 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.

Single Life Expectancy Wisconsin 2018 Mortality Table

Sample Attained Ages in 2020	Future Life Expectancy (Years)*	
	Males	Females
40	45.4	48.3
45	40.3	43.2
50	35.3	38.2
55	30.4	33.2
60	25.8	28.4
65	21.4	23.7
70	17.1	19.2
75	13.2	15.0
80	9.7	11.1
85	6.8	7.9

** Based on retirements in 2020. Retirements in future years will reflect improvements in life expectancy.*

The values shown above are for non-disabled participants.

Active Participant Mortality Rates

Sample Attained Ages in 2020	Mortality Rates*	
	Males	Females
20	0.000135	0.000081
25	0.000165	0.000091
30	0.000214	0.000124
35	0.000380	0.000224
40	0.000500	0.000310
45	0.000621	0.000462
50	0.000805	0.000668
55	0.001873	0.001205
60	0.002713	0.001760
65	0.004161	0.002634
70	0.006737	0.004356
75	0.011283	0.007870
80	0.020691	0.014823

** Based on mortality improvements to 2020. Future years will reflect improvements in mortality.*

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		Exec. & Elected	University		Public School		Protective*	
	Males	Females		Males	Females	Males	Females	With S.S.	W/O S.S.
50								6%	2%
51								8%	4%
52								10%	4%
53								25%	17%
54								20%	23%
55								20%	25%
56								20%	25%
57	19%	17%	8%	12%	15%	33%	27%	20%	25%
58	19%	17%	8%	12%	15%	29%	27%	20%	33%
59	19%	17%	8%	12%	10%	24%	27%	20%	33%
60	19%	17%	20%	12%	12%	25%	27%	20%	20%
61	19%	17%	12%	12%	16%	25%	27%	20%	20%
62	26%	27%	12%	12%	15%	35%	37%	30%	40%
63	29%	27%	12%	12%	20%	32%	30%	30%	40%
64	28%	27%	15%	12%	20%	29%	28%	30%	40%
65	30%	30%	15%	15%	20%	29%	37%	40%	40%
66	35%	35%	15%	20%	24%	35%	39%	40%	100%
67	30%	30%	15%	20%	20%	33%	33%	40%	100%
68	19%	25%	15%	18%	17%	27%	30%	40%	100%
69	19%	25%	20%	16%	17%	23%	28%	40%	100%
70	19%	25%	20%	20%	18%	25%	38%	100%	100%
71	19%	20%	20%	18%	18%	20%	20%	100%	100%
72	19%	20%	20%	16%	18%	15%	20%	100%	100%
73	19%	20%	20%	16%	15%	15%	20%	100%	100%
74	19%	20%	20%	16%	15%	15%	20%	100%	100%
75	100%	100%	100%	100%	100%	100%	100%	100%	100%

* Includes reduced retirements.

Reduced Retirement Pattern

Age	% Retiring Next Year						
	General		Exec. & Elected	University		Public School	
	Males	Females		Males	Females	Males	Females
55	8.0%	7.0%	3.0%	3.0%	5.0%	13.0%	12.0%
56	8.0%	7.0%	3.0%	3.0%	5.0%	13.0%	12.0%
57	4.8%	5.5%	3.0%	3.0%	5.0%	12.0%	12.0%
58	5.7%	6.5%	3.0%	3.0%	5.0%	13.0%	12.0%
59	6.8%	7.0%	3.0%	4.0%	5.0%	14.0%	13.0%
60	8.5%	9.5%	5.0%	5.5%	9.0%	14.0%	17.0%
61	9.0%	9.5%	5.0%	5.5%	9.0%	15.0%	17.0%
62	17.0%	16.0%	2.0%	7.4%	12.0%	21.0%	23.0%
63	18.0%	18.0%	2.0%	7.4%	12.0%	21.0%	23.0%
64	17.0%	18.0%	2.0%	10.0%	15.0%	21.0%	23.0%



The assumed rates of separation from employment prior to service retirement due to disability and other causes are shown below for sample ages. For other terminations it was assumed that a percentage, depending on age of participants terminating after age 35 with 5 or more years of service, will leave their contributions on deposit and be paid a benefit at normal retirement age and that the remaining participants would take a separation benefit. The percentage taking a separation benefit is 25% at age 35, grading downward to 0% at retirement eligibility. All participants terminating prior to normal retirement age with less than 5 years of service were assumed to take a separation benefit.

Assumed Termination Rates by Attained Age and Years of Service

Age	Service	% of Active Participants Terminating								
		General		Exec. &	University		Public Schools		Protective	
		Males	Females	Elected	Males	Females	Males	Females	With Soc. Sec.	Without Soc. Sec.
	0	17.0%	20.0%	14.0%	16.0%	14.5%	18.5%	15.0%	16.0%	4.0%
	1	12.3%	15.0%	13.0%	15.0%	14.0%	11.0%	11.0%	9.5%	3.5%
	2	9.3%	11.5%	12.0%	13.0%	13.0%	8.0%	8.0%	6.0%	1.5%
	3	7.6%	10.0%	10.0%	11.0%	10.0%	6.5%	6.0%	5.0%	1.3%
	4	7.5%	9.5%	10.0%	9.0%	9.5%	5.5%	5.5%	4.5%	1.2%
	5	5.8%	7.8%	5.0%	8.0%	9.0%	4.0%	5.0%	4.0%	1.1%
	6	4.8%	7.0%	5.0%	7.5%	7.0%	3.5%	4.0%	3.8%	1.0%
	7	4.7%	6.0%	5.0%	6.0%	6.0%	3.2%	3.7%	3.5%	0.9%
	8	4.1%	5.7%	5.0%	5.5%	5.0%	3.0%	3.3%	3.0%	0.8%
	9	4.0%	5.3%	5.0%	5.0%	4.0%	2.8%	3.0%	2.5%	0.7%
25	10 & Over	4.0%	5.0%	5.0%	5.0%	4.0%	2.5%	2.5%	2.5%	0.7%
30		3.7%	4.7%	5.0%	4.7%	4.0%	2.2%	2.4%	2.3%	0.7%
35		3.0%	3.9%	5.0%	4.2%	4.0%	1.8%	1.9%	2.0%	0.7%
40		2.4%	3.2%	5.0%	3.4%	3.7%	1.5%	1.5%	1.6%	0.6%
45		2.0%	2.7%	4.7%	2.7%	3.2%	1.4%	1.3%	1.4%	0.6%
50		1.7%	2.2%	4.2%	2.2%	2.7%	1.3%	1.2%	1.2%	0.5%
55		1.6%	2.0%	4.0%	2.0%	2.5%	1.3%	1.2%	1.2%	0.5%
60		1.6%	2.0%	4.0%	2.0%	2.5%	1.3%	1.2%	1.2%	0.5%

Disability Rates

Age	% of Active Participants Becoming Disabled									
	General		Exec. & Elected		University		Public Schools		Protective	
	Males	Females	Males	Females	Males	Females	Males	Females	With SS	W/O SS
20	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.03%
25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.03%
30	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.03%
35	0.01%	0.02%	0.01%	0.01%	0.00%	0.02%	0.00%	0.01%	0.01%	0.03%
40	0.02%	0.03%	0.01%	0.01%	0.00%	0.02%	0.01%	0.01%	0.02%	0.04%
45	0.04%	0.04%	0.01%	0.01%	0.01%	0.02%	0.02%	0.04%	0.02%	0.08%
50	0.09%	0.06%	0.02%	0.02%	0.01%	0.04%	0.06%	0.07%	0.04%	0.46%
55	0.17%	0.12%	0.09%	0.09%	0.04%	0.06%	0.12%	0.10%	0.61%	0.34%
60	0.30%	0.16%	0.11%	0.11%	0.06%	0.09%	0.19%	0.15%	1.02%	0.10%

Miscellaneous and Technical Assumptions

Active Member Data:	For purposes of determining eligibility for the sick leave conversion credit programs, the active member data provided for the sick leave valuation was compared against the data provided for the active lives valuation. Only members with a corresponding record in the active lives data were included in the sick leave valuation. For each member, date of birth, gender and service credit were used as provided in the active lives data. Pay rate and sick leave specific information (sick leave balance, accrual rate, average usage) were used as provided in the sick leave data extract for purposes of calculating active member sick leave credits at retirement. For any members who did not have an accrual rate in the data provided, an assumed accrual rate of 16.25 days per year was used for non-University members and 9.00 days per year was used for University members. 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.
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 taking the balance on deposit for these annuitants multiplied by the ratio of the present value of future benefits for active status annuitants to the balance on deposit for active status annuitants multiplied by fifty percent. The fifty percent corresponds to the portion of the escrowed population that is assumed to begin using sick leave credits to pay for health insurance at some point in the future. This methodology was utilized for both the ASLCC Program and SHICC Program escrowed liabilities.
Liability Adjustments:	Active liabilities were loaded by 4% to account for general unknowns, including but not limited to, potential missing data, the possibility of continuation to a spouse after death of the retiree, etc. SHICC plan retiree and deferred liabilities were loaded by 3% to account for potential continuation to a spouse after death of the retiree and other unknowns.

Miscellaneous and Technical Assumptions

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.

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 7.00%; the municipal bond rate is 2.00%; and the resulting Single Discount Rate is 7.00%.

Administrative expenses were not included in the single discount rate 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 0.1% contribution rate for the first year was developed from the 2020 actuarial valuations.

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 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 Ending December 31, 2120

Year	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
1	\$ 0	\$ 5,062,782	\$ 0	\$ 5,062,782
2	0	4,849,252	0	4,849,252
3	0	4,672,769	0	4,672,769
4	0	4,513,408	0	4,513,408
5	0	4,364,824	0	4,364,824
6	0	4,224,808	0	4,224,808
7	0	4,092,550	0	4,092,550
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0
31	0	0	0	0
32	0	0	0	0
33	0	0	0	0
34	0	0	0	0
35	0	0	0	0
36	0	0	0	0
37	0	0	0	0
38	0	0	0	0
39	0	0	0	0
40	0	0	0	0
41	0	0	0	0
42	0	0	0	0
43	0	0	0	0
44	0	0	0	0
45	0	0	0	0
46	0	0	0	0
47	0	0	0	0
48	0	0	0	0
49	0	0	0	0
50	0	0	0	0



Single Discount Rate Development

Projection of Contributions Ending December 31, 2120

(Concluded)

Year	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
51	\$ 0	\$ 0	\$ 0	0
52	0	0	0	0
53	0	0	0	0
54	0	0	0	0
55	0	0	0	0
56	0	0	0	0
57	0	0	0	0
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, 2120

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
1	\$ 1,208,791,207	\$ 5,062,782	\$ 58,735,875	\$ 82,768,598	\$ 1,237,886,712
2	1,237,886,712	4,849,252	63,096,261	84,647,904	1,264,287,608
3	1,264,287,608	4,672,769	66,003,946	86,389,847	1,289,346,277
4	1,289,346,277	4,513,408	67,114,818	88,100,247	1,314,845,115
5	1,314,845,115	4,364,824	68,197,913	89,842,786	1,340,854,812
6	1,340,854,812	4,224,808	70,416,955	91,582,295	1,366,244,960
7	1,366,244,960	4,092,550	71,562,420	93,315,641	1,392,090,731
8	1,392,090,731	0	72,749,068	94,943,198	1,414,284,861
9	1,414,284,861	0	73,462,178	96,472,250	1,437,294,933
10	1,437,294,933	0	74,457,037	98,048,724	1,460,886,621
11	1,460,886,621	0	75,902,055	99,650,422	1,484,634,988
12	1,484,634,988	0	77,778,106	101,248,257	1,508,105,139
13	1,508,105,139	0	79,566,127	102,829,645	1,531,368,656
14	1,531,368,656	0	81,096,935	104,405,419	1,554,677,141
15	1,554,677,141	0	82,838,418	105,977,092	1,577,815,815
16	1,577,815,815	0	85,020,769	107,521,709	1,600,316,754
17	1,600,316,754	0	87,615,013	109,007,512	1,621,709,253
18	1,621,709,253	0	90,355,282	110,410,699	1,641,764,670
19	1,641,764,670	0	92,982,750	111,724,172	1,660,506,093
20	1,660,506,093	0	95,503,387	112,949,342	1,677,952,047
21	1,677,952,047	0	97,941,157	114,086,680	1,694,097,570
22	1,694,097,570	0	100,349,188	115,134,011	1,708,882,393
23	1,708,882,393	0	102,703,491	116,087,941	1,722,266,843
24	1,722,266,843	0	105,025,006	116,944,974	1,734,186,811
25	1,734,186,811	0	107,504,853	117,694,045	1,744,376,003
26	1,744,376,003	0	110,033,334	118,320,289	1,752,662,958
27	1,752,662,958	0	112,487,432	118,815,935	1,758,991,461
28	1,758,991,461	0	114,773,706	119,180,264	1,763,398,018
29	1,763,398,018	0	116,842,033	119,417,556	1,765,973,541
30	1,765,973,541	0	118,434,616	119,543,044	1,767,081,969
31	1,767,081,969	0	119,798,452	119,573,708	1,766,857,225
32	1,766,857,225	0	121,116,814	119,512,613	1,765,253,024
33	1,765,253,024	0	122,101,203	119,366,448	1,762,518,269
34	1,762,518,269	0	122,473,139	119,162,218	1,759,207,348
35	1,759,207,348	0	121,658,547	118,958,482	1,756,507,283
36	1,756,507,283	0	119,540,596	118,842,352	1,755,809,038
37	1,755,809,038	0	116,392,898	118,901,781	1,758,317,921
38	1,758,317,921	0	112,300,423	119,218,217	1,765,235,715
39	1,765,235,715	0	107,365,170	119,872,275	1,777,742,820
40	1,777,742,820	0	101,780,610	120,939,926	1,796,902,135
41	1,796,902,135	0	95,785,761	122,487,349	1,823,603,723
42	1,823,603,723	0	89,646,612	124,567,696	1,858,524,807
43	1,858,524,807	0	83,791,509	127,213,635	1,901,946,933
44	1,901,946,933	0	78,216,533	130,445,007	1,954,175,407
45	1,954,175,407	0	72,558,851	134,295,670	2,015,912,227
46	2,015,912,227	0	66,718,392	138,818,207	2,088,012,041
47	2,088,012,041	0	60,916,106	144,064,839	2,171,160,774
48	2,171,160,774	0	55,314,491	150,077,991	2,265,924,274
49	2,265,924,274	0	49,962,830	156,895,576	2,372,857,020
50	2,372,857,020	0	44,845,652	164,556,940	2,492,568,308



Single Discount Rate Development Projection of Plan Fiduciary Net Position Ending December 31, 2120 (Concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
51	\$ 2,492,568,308	\$ 0	\$ 40,013,462	\$ 173,102,997	\$ 2,625,657,843
52	2,625,657,843	0	35,500,267	182,574,554	2,772,732,130
53	2,772,732,130	0	31,264,048	193,015,514	2,934,483,597
54	2,934,483,597	0	27,330,463	204,473,464	3,111,626,598
55	3,111,626,598	0	23,659,987	216,999,768	3,304,966,378
56	3,304,966,378	0	20,283,979	230,649,714	3,515,332,114
57	3,515,332,114	0	17,216,684	245,480,856	3,743,596,286
58	3,743,596,286	0	14,434,737	261,555,069	3,990,716,617
59	3,990,716,617	0	11,971,752	278,938,239	4,257,683,104
60	4,257,683,104	0	9,806,704	297,700,388	4,545,576,788
61	4,545,576,788	0	7,916,708	317,917,977	4,855,578,057
62	4,855,578,057	0	6,288,635	339,674,084	5,188,963,506
63	5,188,963,506	0	4,921,639	363,058,101	5,547,099,968
64	5,547,099,968	0	3,783,168	388,166,826	5,931,483,627
65	5,931,483,627	0	2,848,818	415,105,832	6,343,740,640
66	6,343,740,640	0	2,104,278	443,989,441	6,785,625,803
67	6,785,625,803	0	1,530,899	474,941,131	7,259,036,035
68	7,259,036,035	0	1,092,000	508,094,949	7,766,038,984
69	7,766,038,984	0	763,076	543,596,473	8,308,872,381
70	8,308,872,381	0	524,168	581,603,031	8,889,951,244
71	8,889,951,244	0	352,265	622,284,466	9,511,883,445
72	9,511,883,445	0	231,520	665,823,875	10,177,475,800
73	10,177,475,800	0	148,799	712,418,186	10,889,745,188
74	10,889,745,188	0	93,188	762,278,957	11,651,930,956
75	11,651,930,956	0	56,645	815,633,218	12,467,507,529
76	12,467,507,529	0	33,337	872,724,380	13,340,198,572
77	13,340,198,572	0	19,051	933,813,245	14,273,992,766
78	14,273,992,766	0	10,480	999,179,133	15,273,161,419
79	15,273,161,419	0	5,536	1,069,121,109	16,342,276,992
80	16,342,276,992	0	2,873	1,143,959,291	17,486,233,409
81	17,486,233,409	0	1,451	1,224,036,289	18,710,268,247
82	18,710,268,247	0	716	1,309,718,753	20,019,986,283
83	20,019,986,283	0	342	1,401,399,028	21,421,384,969
84	21,421,384,969	0	156	1,499,496,942	22,920,881,756
85	22,920,881,756	0	69	1,604,461,721	24,525,343,408
86	24,525,343,408	0	32	1,716,774,037	26,242,117,413
87	26,242,117,413	0	14	1,836,948,218	28,079,065,617
88	28,079,065,617	0	5	1,965,534,593	30,044,600,205
89	30,044,600,205	0	2	2,103,122,014	32,147,722,218
90	32,147,722,218	0	1	2,250,340,555	34,398,062,772
91	34,398,062,772	0	0	2,407,864,394	36,805,927,166
92	36,805,927,166	0	0	2,576,414,902	39,382,342,068
93	39,382,342,068	0	0	2,756,763,945	42,139,106,012
94	42,139,106,012	0	0	2,949,737,421	45,088,843,433
95	45,088,843,433	0	0	3,156,219,040	48,245,062,474
96	48,245,062,474	0	0	3,377,154,373	51,622,216,847
97	51,622,216,847	0	0	3,613,555,179	55,235,772,026
98	55,235,772,026	0	0	3,866,504,042	59,102,276,068
99	59,102,276,068	0	0	4,137,159,325	63,239,435,392
100	63,239,435,392	0	0	4,426,760,477	67,666,195,870



Single Discount Rate Development

Present Values of Projected Benefits Ending December 31, 2120

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	\$ 1,208,791,207	\$ 58,735,875	\$ 58,735,875	\$ 0	\$ 56,782,114	\$ 0	\$ 56,782,114
2	1,237,886,712	63,096,261	63,096,261	0	57,006,970	0	57,006,970
3	1,264,287,608	66,003,946	66,003,946	0	55,732,748	0	55,732,748
4	1,289,346,277	67,114,818	67,114,818	0	52,963,319	0	52,963,319
5	1,314,845,115	68,197,913	68,197,913	0	50,297,232	0	50,297,232
6	1,340,854,812	70,416,955	70,416,955	0	48,536,277	0	48,536,277
7	1,366,244,960	71,562,420	71,562,420	0	46,098,889	0	46,098,889
8	1,392,090,731	72,749,068	72,749,068	0	43,797,478	0	43,797,478
9	1,414,284,861	73,462,178	73,462,178	0	41,333,453	0	41,333,453
10	1,437,294,933	74,457,037	74,457,037	0	39,152,533	0	39,152,533
11	1,460,886,621	75,902,055	75,902,055	0	37,301,291	0	37,301,291
12	1,484,634,988	77,778,106	77,778,106	0	35,722,671	0	35,722,671
13	1,508,105,139	79,566,127	79,566,127	0	34,153,168	0	34,153,168
14	1,531,368,656	81,096,935	81,096,935	0	32,532,950	0	32,532,950
15	1,554,677,141	82,838,418	82,838,418	0	31,057,538	0	31,057,538
16	1,577,815,815	85,020,769	85,020,769	0	29,790,410	0	29,790,410
17	1,600,316,754	87,615,013	87,615,013	0	28,691,034	0	28,691,034
18	1,621,709,253	90,355,282	90,355,282	0	27,652,693	0	27,652,693
19	1,641,764,670	92,982,750	92,982,750	0	26,595,153	0	26,595,153
20	1,660,506,093	95,503,387	95,503,387	0	25,529,077	0	25,529,077
21	1,677,952,047	97,941,157	97,941,157	0	24,467,961	0	24,467,961
22	1,694,097,570	100,349,188	100,349,188	0	23,429,480	0	23,429,480
23	1,708,882,393	102,703,491	102,703,491	0	22,410,431	0	22,410,431
24	1,722,266,843	105,025,006	105,025,006	0	21,417,755	0	21,417,755
25	1,734,186,811	107,504,853	107,504,853	0	20,489,224	0	20,489,224
26	1,744,376,003	110,033,334	110,033,334	0	19,599,182	0	19,599,182
27	1,752,662,958	112,487,432	112,487,432	0	18,725,520	0	18,725,520
28	1,758,991,461	114,773,706	114,773,706	0	17,856,179	0	17,856,179
29	1,763,398,018	116,842,033	116,842,033	0	16,988,751	0	16,988,751
30	1,765,973,541	118,434,616	118,434,616	0	16,093,749	0	16,093,749
31	1,767,081,969	119,798,452	119,798,452	0	15,214,090	0	15,214,090
32	1,766,857,225	121,116,814	121,116,814	0	14,375,251	0	14,375,251
33	1,765,253,024	122,101,203	122,101,203	0	13,544,007	0	13,544,007
34	1,762,518,269	122,473,139	122,473,139	0	12,696,508	0	12,696,508
35	1,759,207,348	121,658,547	121,658,547	0	11,786,973	0	11,786,973
36	1,756,507,283	119,540,596	119,540,596	0	10,824,088	0	10,824,088
37	1,755,809,038	116,392,898	116,392,898	0	9,849,600	0	9,849,600
38	1,758,317,921	112,300,423	112,300,423	0	8,881,570	0	8,881,570
39	1,765,235,715	107,365,170	107,365,170	0	7,935,750	0	7,935,750
40	1,777,742,820	101,780,610	101,780,610	0	7,030,818	0	7,030,818
41	1,796,902,135	95,785,761	95,785,761	0	6,183,836	0	6,183,836
42	1,823,603,723	89,646,612	89,646,612	0	5,408,877	0	5,408,877
43	1,858,524,807	83,791,509	83,791,509	0	4,724,866	0	4,724,866
44	1,901,946,933	78,216,533	78,216,533	0	4,121,964	0	4,121,964
45	1,954,175,407	72,558,851	72,558,851	0	3,573,652	0	3,573,652
46	2,015,912,227	66,718,392	66,718,392	0	3,071,027	0	3,071,027
47	2,088,012,041	60,916,106	60,916,106	0	2,620,514	0	2,620,514
48	2,171,160,774	55,314,491	55,314,491	0	2,223,870	0	2,223,870
49	2,265,924,274	49,962,830	49,962,830	0	1,877,301	0	1,877,301
50	2,372,857,020	44,845,652	44,845,652	0	1,574,793	0	1,574,793



Single Discount Rate Development

Present Values of Projected Benefits Ending December 31, 2120 (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	\$ 2,492,568,308	\$ 40,013,462	\$ 40,013,462	\$ 0	\$ 1,313,183	\$ 0	\$ 1,313,183
52	2,625,657,843	35,500,267	35,500,267	0	1,088,848	0	1,088,848
53	2,772,732,130	31,264,048	31,264,048	0	896,183	0	896,183
54	2,934,483,597	27,330,463	27,330,463	0	732,175	0	732,175
55	3,111,626,598	23,659,987	23,659,987	0	592,378	0	592,378
56	3,304,966,378	20,283,979	20,283,979	0	474,628	0	474,628
57	3,515,332,114	17,216,684	17,216,684	0	376,501	0	376,501
58	3,743,596,286	14,434,737	14,434,737	0	295,013	0	295,013
59	3,990,716,617	11,971,752	11,971,752	0	228,669	0	228,669
60	4,257,683,104	9,806,704	9,806,704	0	175,061	0	175,061
61	4,545,576,788	7,916,708	7,916,708	0	132,077	0	132,077
62	4,855,578,057	6,288,635	6,288,635	0	98,051	0	98,051
63	5,188,963,506	4,921,639	4,921,639	0	71,717	0	71,717
64	5,547,099,968	3,783,168	3,783,168	0	51,521	0	51,521
65	5,931,483,627	2,848,818	2,848,818	0	36,259	0	36,259
66	6,343,740,640	2,104,278	2,104,278	0	25,030	0	25,030
67	6,785,625,803	1,530,899	1,530,899	0	17,019	0	17,019
68	7,259,036,035	1,092,000	1,092,000	0	11,345	0	11,345
69	7,766,038,984	763,076	763,076	0	7,409	0	7,409
70	8,308,872,381	524,168	524,168	0	4,757	0	4,757
71	8,889,951,244	352,265	352,265	0	2,988	0	2,988
72	9,511,883,445	231,520	231,520	0	1,835	0	1,835
73	10,177,475,800	148,799	148,799	0	1,102	0	1,102
74	10,889,745,188	93,188	93,188	0	645	0	645
75	11,651,930,956	56,645	56,645	0	366	0	366
76	12,467,507,529	33,337	33,337	0	202	0	202
77	13,340,198,572	19,051	19,051	0	108	0	108
78	14,273,992,766	10,480	10,480	0	55	0	55
79	15,273,161,419	5,536	5,536	0	27	0	27
80	16,342,276,992	2,873	2,873	0	13	0	13
81	17,486,233,409	1,451	1,451	0	6	0	6
82	18,710,268,247	716	716	0	3	0	3
83	20,019,986,283	342	342	0	1	0	1
84	21,421,384,969	156	156	0	1	0	1
85	22,920,881,756	69	69	0	0	0	0
86	24,525,343,408	32	32	0	0	0	0
87	26,242,117,413	14	14	0	0	0	0
88	28,079,065,617	5	5	0	0	0	0
89	30,044,600,205	2	2	0	0	0	0
90	32,147,722,218	1	1	0	0	0	0
91	34,398,062,772	0	0	0	0	0	0
92	36,805,927,166	0	0	0	0	0	0
93	39,382,342,068	0	0	0	0	0	0
94	42,139,106,012	0	0	0	0	0	0
95	45,088,843,433	0	0	0	0	0	0
96	48,245,062,474	0	0	0	0	0	0
97	51,622,216,847	0	0	0	0	0	0
98	55,235,772,026	0	0	0	0	0	0
99	59,102,276,068	0	0	0	0	0	0
100	63,239,435,392	0	0	0	0	0	0
Totals					\$ 1,156,359,760	\$ 0	\$ 1,156,359,760



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 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 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.