



**AQUARIUS
CAPITAL**

CITY OF SPRINGFIELD

OTHER POSTEMPLOYMENT BENEFITS (OPEB) REPORTING IN ACCORDANCE WITH GASB 74/75 FISCAL YEAR JULY 1, 2023 TO JUNE 30, 2024

**Prepared by: AQUARIUS CAPITAL SOLUTIONS GROUP LLC
Date: September 18, 2024**



September 18, 2024

Mr. Patrick S. Burns
City Comptroller
City of Springfield
36 Court Street, Room 400
Springfield, MA 01103

Re: Report - GASB 74/75 Valuation for Fiscal Year July 1, 2023, to June 30, 2024

Dear Mr. Burns:

Enclosed is an analysis of estimated liabilities for other postemployment benefits (OPEB) under Government Accounting Standards Board (GASB) No. 74/75 for the City of Springfield (the "City"). The valuation was done for fiscal year July 1, 2023, to June 30, 2024, for the City. The attached report was completed in accordance with generally accepted actuarial principles and practices.

The calculations contained herein are done for the sole purpose of reporting GASB 74/75 results for the audited financial statements. Fiscal year July 1, 2017, to June 30, 2018, was the first year of implementation for GASB 74/75 for the City, thus, fiscal year July 1, 2023, to June 30, 2024, is the seventh year of GASB 74/75 reporting.

Financial Results

Sections I-II of the report, which is nine pages, includes the financial forecast for GASB 74/75 for the City. The Net OPEB Liability as of year-end June 30, 2024, is \$1,130.171 million, which is based on the projected pay-as-you-go results for fiscal year July 1, 2023, to June 30, 2024, as well as the Plan Fiduciary Net Position as of June 30, 2024, of \$15,633,776.

Pages 1-8 of the report illustrate the financial projections for the plan as of year-end June 30, 2024, to assist your auditors with accounting for the respective plan year. Although the auditors may only require pages 1-8, we recommend forwarding the report in its entirety. The remainder of the report will include additional documentation and disclosures.

Results for this valuation are based on census information provided by your organization in July 2024. This is based on a total of 9,798 active employees and retirees, reflecting the sum of 5,926 active employees (4,245 electing coverage and 1,681 waiving coverage) and 3,872 in-actives (4,245 retirees and 361 surviving spouses). It is assumed that 100% of those waiving coverage will elect medical coverage in retirement with 60% electing single coverage, similar to the current retiree distribution, and plan cost equivalent to the enrollment weighted average of the plan options selected by current pre-65 and post-65 retirees.

Covered Benefits and Claim Cost Assumptions

Employees who retire from the City may be eligible for pre-65 and post-65 postemployment medical, pharmacy, and dental/vision benefits. Medical coverage, including prescription drugs as part of the medical plan, is offered to pre-65 and post-65 retirees through the Commonwealth of Massachusetts Group Insurance City (GIC) on a fully insured basis. A list of GIC plan offerings and their associated premiums can be found in Section VI, page 18 of this report. In addition, dental/vision benefits are provided to retirees through Cigna. A group life insurance benefit of \$2,000 is also provided to retirees of the City.

Base plan costs are based on premium rates for the GIC plans. Fully insured premium rates effective July 1, 2023, and July 1, 2024, for pre-65 and post-65 retirees are outlined in Section VI, page 18 of this report. These premium rates are illustrated before retiree contributions, adjustments for aging and the implicit subsidy, and are assumed to include all administrative expenses and PPACA fees. It is further assumed that the premium rates do not contain a cross subsidy of costs between the pre-65 costs and post-65 costs.

Sensitivity Analysis

Section I (page 3) of the report includes a sensitivity analysis as of fiscal year-end June 30, 2024, based on varying the discount interest rate and the healthcare cost inflation rate (trend) for GASB 74/75. We illustrate two scenarios for each variable of discount rate and trend rate as prescribed under GASB 74/75.

The single discount rate is a blend of the annual expected long-term rate of return on OPEB investments of 5.03% for the first 0.5 years of "funded" benefit payments beginning July 1, 2024, and the prescribed discount interest rate for the "unfunded" portion of future benefit payments using the average yield of two 20-year municipal bond indices (e.g., S&P Municipal Bond 20 Year High Grade Rate Index - 4.21% and Fidelity GO AA 20 Years - 3.97%) of 4.09% measured at June 30, 2024.

The single discount rate used was 4.09%, which is based on an end of year measurement date of 6/30/24 and is consistent with the prescribed discount rate methodology under GASB 74/75. The prior valuation single discount rate was 4.00%. Details of the discount rate assumption are described further in the report in Section IV, page 13 and single rate calculation illustrated in Section X, page 22.

Overview of Deferred Inflows and Deferred Outflows

Fiscal year July 1, 2023, to June 30, 2024, is the seventh year under GASB 74/75 reporting for the City. As such, deferred inflows and outflows are calculated along with the amortization of those inflows/outflows and are illustrated in Section I, pages 4-8 of the report in sub-sections F, G, H, I, and J.

For the 2023/2024 plan year, the net difference between expected and actual earnings on OPEB investments on page 4 (line 2 of sub-section F) reflects a deferred inflow (actuarial gain) of \$19,292 and the impact due to changes in assumptions on page 4 (line 3 of sub-section F) reflects a deferred inflow (actuarial gain) of \$160.141 million. Total deferred inflows/outflows for the 2023/2024 plan year described above reflects the changes in the total OPEB liability as of July 1, 2023, from the prior implemented liability through yearend June 30, 2023, with results driven by the following:

- Difference between expected earnings on OPEB plan investments during FY 7/1/23 to 6/30/24 of 5.03% and actual gains realized during the fiscal year of approximately 5.20%.
- Change in discount rate assumption from 4.00% to 4.09% along with reductions in starting claims cost and trend (i.e., favorable premium rate changes since prior valuation), decreased the liability.

The amortization of the current year deferred inflows and outflows is also reflected on page 4 of the report (sub-section G). For yearend reporting, the deferred inflow for the difference between expected and actual earnings on OPEB investments of \$19,292 for the 2023/2024 measurement period has a projected amortization of -\$3,858 during the 2023/2024 fiscal year with a deferred inflow balance of \$15,434 as of yearend June 30, 2024. The deferred inflow for the changes in assumptions of \$160.141 million for the 2023/2024 measurement period year has a projected amortization of -\$20.879 million during the 2023/2024 fiscal year with a deferred inflow balance of \$139.262 million as of yearend June 30, 2024.

An amortization schedule that includes the current year and prior years amortization amounts is included on pages 5-6 of the report (sub-section H). Also included on page 5 are initial and remaining balances of all current and prior amortization amounts reflecting a total amortization expense of -\$43.629 million for FY 2023/2024 and total yearend June 30, 2024, remaining balance of -\$349.817 million (net deferred inflow balance). Sub-section I, on page 7 of report also includes a projection schedule of the recognized amortization expense and unamortized balances by fiscal year end.

Sub-section J, on page 8 of the report illustrates actual and expected OPEB plan investments during fiscal year 2023/2024. Expected investment return was illustrated in the expense calculation along with the amortization of the net difference between expected and actual returns for the fiscal year resulting in a deferred inflow of resources.

Demographic Information

Section III of the report illustrates additional information pertaining to the underlying census information including age and sex analysis for active and retired employees along with summaries of the active population by age and years of service. Census analysis is illustrated separately for actives and retirees. As part of the report, we also included a comparison of census demographic information to the prior valuation report of July 1, 2021. This is highlighted on pages 10 through 12 of the report.

Assumptions & Definitions

As part of this report, we included supporting documentation such as a summary of assumptions and key definitions (glossary), which are provided in Sections IV through VI. This includes assumptions for health care costs, contribution rates, healthcare inflation, decrement tables (e.g., probability of death, turnover, disability, and retirement) and other provisions.

The GASB 74/75 results on pages 1-8 are based on the assumptions and cost methods as prescribed under GASB 74/75 (e.g., discount rate, aging requirements, actuarial cost method under Entry Age Normal, etc.) See pages 13-18 for details on assumptions and definitions.

The mortality tables used for this valuation is based on the Society of Actuaries Pub-2010 Public Retirement Plans Healthy Male and Female Total Dataset Headcount-Weighted Mortality tables using Employee and Healthy Annuitant Tables for both pre- and post-retirement projected with mortality improvements using the most current Society of Actuaries Mortality Improvement Scale MP-2021.

Employees of the City participate in the Springfield Retirement System (SRS) or the Commonwealth of Massachusetts Teachers' Retirement System (MTRS). The decrement tables used in this valuation for SRS are based on the most recent SRS Actuarial Valuation Report by the Public Employees Retirement Administration Commission (PERAC) dated January 1, 2022. The decrement tables used for MTRS are based on the most recent Commonwealth Actuarial Valuation Report by PERAC dated January 1, 2023.

Healthcare Reform

The Patient Protection and Affordable Care Act (PPACA) enacted in March 2010 (Healthcare Reform) includes several fees and/or taxes levied on employer groups either directly (e.g., self-funded employer groups which calculates and pays the fees directly) or indirectly (e.g., fully insured groups in which the health insurer pays and passes on to the group in their premium rates). Fees associated with PPACA are reflected as appropriate in the valuation and described in detail on page 14 of the report.

COVID-19 Pandemic

There have been no special adjustments or considerations made to valuation results due to the COVID-19 pandemic. No special considerations were made for COVID-19's impact on assets within the OPEB trust. Similarly, no special adjustments were made to the OPEB liability calculations. The impact of COVID-19 will be reviewed in future years including the potential impact on selected assumptions (e.g., mortality, morbidity, etc.).

Projected Pay-As-You-Go and OPEB Liability Projections for Twenty (20) Years

We included a forecast of the projected pay-as-you-go for twenty (20) years. This is illustrated on page 19 of the report. Furthermore, we included a forecast of the OPEB Liability during the same time period for illustrative purposes.

Plan Fiduciary Net Position

We include a multi-year forecast of the Plan Fiduciary Net Position (OPEB Trust) including estimated future employer contributions to the Trust as well as projected benefit payments and earnings from the invested assets. Sections IX and X on pages 21 and 22 include these projections.

Information Reviewed

We based our analysis on reviewing electronic census information provided in July 2024 (record-by-record review), retiree plan information, cost information (e.g., premium rates through June 30, 2025), year-end audited financial statements as of June 30, 2023, and other summary information of retiree benefits and eligibility. We also gathered additional information from the City through emails and other correspondence to confirm retiree benefit information, census confirmations, and assumptions. Salary information was also incorporated into the valuation to reflect the prescribed actuarial cost method for GASB74/75.

A summary of benefits and eligibility are provided in this report for illustrative purposes in order to understand the types of benefits reflected in the valuation. We recommend reviewing your organization's plan document for details on eligibility and covered benefits. Information in this report should not be used instead of the plan document and/or summary plan description.

The projected Net OPEB Liability as of June 30, 2024, is based on the *projected* pay-as-you-go results for fiscal year July 1, 2023, to June 30, 2024, which reflects both implicit and explicit subsidies, as well as the Plan Fiduciary Net Position as of June 30, 2024, of \$15,633,776 as provided by the City.

Data Reliance & Limitations

In our review, we have relied on the information provided by the City. We have not audited or verified the accuracy of the information provided. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

This report and all attachments contained herein are for the internal use of the City. It may not be provided to other parties without prior consent. If consent is granted, the report must be provided in its entirety. We understand the City intends to distribute this letter and attachments to its auditor in connection with the reporting of results of this report for the sole use of preparation of audited financial statements. Aquarius consents to this distribution as long as the report is provided in its entirety and the auditor is advised to have an actuary review the work.

This report is provided to the City for the purpose of calculating results under GASB 74/75. Information in this report may not be appropriate to use for other purposes. Aquarius does not intend to benefit from the overall results of the report, and we assume no duty, liability or obligation to parties that use this work for other reasons other than its intention, *i.e.*, reporting of GASB 74/75 for financial statements. Furthermore, since the City has established a separate irrevocable OPEB trust to fund these benefits, disclosure reporting would be required under GASB 74.

Mr. Patrick S. Burns
September 18, 2024
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Actuarial Opinion

I, Michael L. Frank, ASA, FCA, MAAA, am President and Actuary of Aquarius Capital Solutions Group LLC. I am an Associate of the Society of Actuaries, Fellow of Conference of Consulting Actuaries, and Member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The attached report was completed in accordance with generally accepted actuarial principles and practices.

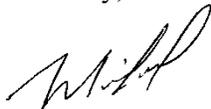
Independence Certification

Our organization and its employees are independent of the City and do not have any conflicts of interest as it relates to the services performed on behalf of the City in the preparation of this report.

We hope that this report is beneficial. When convenient, please contact me so that we can schedule a call or meeting to review the report in more detail. We are available to walk through the report with your auditors as well to assist with the implementation of GASB 74/75 reporting for the current fiscal year.

In addition, please extend thanks to you and your team for assistance in the gathering of information to help us complete this analysis. Their assistance was much appreciated. We look forward to working with you in the future.

Sincerely,



Michael L. Frank, A.S.A., M.A.A.A., F.C.A.
President & Actuary
American Academy of Actuaries ID No. 21342

Cc: Donald Rusconi – Aquarius Capital

Enclosure



City of Springfield
Valuation Estimates under GASB No. 75 valued as of July 1, 2023

CITY OF SPRINGFIELD

GASB NO. 74 & 75

VALUATION AS OF JULY 1, 2023

Prepared by: Aquarius Capital, a division of Risk Strategies

Date: September 18, 2024



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SECTION I: GASB NO. 74/75 REPORTING TO YEAR END JUNE 30, 2024 REPORTING

(Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018)

Section A: Reported OPEB Liability as of Year End June 30, 2024

1 Discount Rate	4.09%
2 Present Value of Future Benefits as of Year End June 30, 2024	\$ 1,515,484,428
3 Total OPEB Liability as of Year End June 30, 2024	\$ 1,145,805,020
4 Plan Fiduciary Net Position as of Year End June 30, 2024	\$ 15,633,776
5 Net OPEB Liability as of Year End June 30, 2024: (3) - (4)	\$ 1,130,171,244
6 Plan Fiduciary Net Position as a Percentage of OPEB Liability: (4) / (3)	1.36%
7 Total Annual Salary (Compensation) based on Valuation Census Information	\$ 422,229,523
8 Net OPEB Liability as a Percentage of Annual Salary: (5) / (7)	267.67%
9 Total Employee Census Counts for Valuation	
a. Active Employees	5,926
b. Retired Employees	3,872
c. Subtotal: (9a) + (9b)	9,798

Section B: Projected Expense Calculation as of Year End June 30, 2024

1 Service Cost with Interest to Year End - Period July 1, 2023 to June 30, 2024	\$ 34,271,406
2 Interest Cost - Period July 1, 2023 to June 30, 2024	
a. Discount Rate	4.09%
b. Total OPEB Liability as of July 1, 2023	\$ 1,259,586,732
c. Actual Benefit Payments - Illustrated as Project for Period July 1, 2023 to June 30, 2024	\$ 38,638,892
d. Interest Cost: (2a) x [(2b) - (2c) / 2]	\$ 50,726,932
3 Investment Return - Illustrated as Expected for Period July 1, 2023 to June 30, 2024 (Illustrated results based on expected return)	\$ (709,680)
4 Employee Contributions - Period July 1, 2023 to June 30, 2024 (Amount is illustrated as zero since employer contributions are illustrated net of employee contributions)	\$ -
5 Administrative Expenses	\$ 28,635
6 Plan Changes	\$ -
7 Amortization of Unrecognized Amounts	
a. Liability (Gain)/Loss (Page 5, Section H, Line 11)	\$ (43,729,556)
b. Asset (Gain)/Loss (Page 5, Section H, Line 12)	\$ 100,470
c. Net (Gain)/Loss: (7a) + (7b)	\$ (43,629,086)
8 Total Expense - Period July 1, 2023 to June 30, 2024 (1) + (2d) + (3) + (4) + (5) + (6) + (7c)	\$ 40,688,207

Notes:

- Employee contributions are illustrated above as zero since benefit payments are illustrated net of employee contributions.
- Investment return on OPEB assets are illustrated as expected with gain/loss amortized over five years.



SECTION I: GASB NO. 74/75 REPORTING TO YEAR END JUNE 30, 2024 REPORTING (CONTINUED)

(Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018)

Section C: Reconciliation of Net OPEB Liability as of Year End June 30, 2024

	<u>Total</u> <u>OPEB Liability</u>	<u>Plan Fiduciary</u> <u>Net Position</u>	<u>Net</u> <u>OPEB Liability</u>
1 Balance Recognized as of Beginning of Year (End of Prior Year) (Audit Report as of June 30, 2023, matches prior Actuarial report issued 9/29/23)	\$ 1,259,586,732	\$ 13,001,659	\$ 1,246,585,073
2 Changes Recognized for Fiscal Year			
a. Service Cost: Section B, Line 1	\$ 34,271,406	\$ -	\$ 34,271,406
b. Interest on Total OPEB Liability: Section B, Line 2d	\$ 50,726,932	\$ -	\$ 50,726,932
c. Change in Benefit Terms: Section B, Line 6	\$ -	\$ -	\$ -
d. Change in Expected to Actual	\$ -	\$ 19,292	\$ (19,292)
e. Changes in Assumptions	\$ (160,141,158)	\$ -	\$ (160,141,158)
f. Benefit Payments: Section B, Line 2c	\$ (38,638,892)	\$ (38,638,892)	\$ -
g. Contributions from Employer	\$ -	\$ 40,570,672	\$ (40,570,672)
h. Contributions from Employees	\$ -	\$ -	\$ -
i. Net Investment Income: Section B, Line 3	\$ -	\$ 709,680	\$ (709,680)
j. Administrative Expenses: Section B, Line 5	\$ -	\$ (28,635)	\$ 28,635
k. Net Changes: (a) + ... + (j)	\$ (113,781,712)	\$ 2,632,117	\$ (116,413,829)
3 Balance Recognized as of End Year - June 30, 2024 (1) + (2k)	\$ 1,145,805,020	\$ 15,633,776	\$ 1,130,171,244

Notes:

1. Employee contributions are illustrated above as zero since benefit payments are illustrated net of employee contributions.
2. Lines 2(d) reflects the net difference between expected and actual earnings on OPEB Investments. See page 8 for details of calculation.
3. Line 2(i) reflects expected investment return on OPEB invested assets. See page 8 for details of calculation.



SECTION I: GASB NO. 74/75 REPORTING TO YEAR END JUNE 30, 2024 REPORTING (CONTINUED)

(Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018)

Section D: Discount (Interest) Rate Sensitivity as of Year End June 30, 2024

	Current Valuation Discount Rate <u>4.09%</u>	Discount Rate Less 1% <u>3.09%</u>	Discount Rate Plus 1% <u>5.09%</u>
1 Total OPEB Liability as of Year End June 30, 2024			
a. OPEB Liability	\$ 1,145,805,020	\$ 1,375,604,386	\$ 971,308,943
b. Ratio to Current Valuation Assumptions	n/a	120.06%	84.77%
2 Plan Fiduciary Net Position as of Year End June 30, 2024			
a. Plan Fiduciary Net Position	\$ 15,633,776	\$ 15,633,776	\$ 15,633,776
b. Ratio to Current Valuation Assumptions	n/a	100.00%	100.00%
3 Net OPEB Liability as of Year End June 30, 2024			
a. OPEB Liability: (1a) - (2a)	\$ 1,130,171,244	\$ 1,359,970,610	\$ 955,675,167
b. Ratio to Current Valuation Assumptions	n/a	120.33%	84.56%

Note: Sensitivity analysis for discount (interest) rate is illustrated as of end of year.

Section E: Healthcare Cost Inflation (Trend) Rate Sensitivity as of Year End June 30, 2024

	Current Valuation Discount Rate	Trend Rate Less 1%	Trend Rate Plus 1%
1 OPEB Liability as of Year End June 30, 2024			
a. OPEB Liability	\$ 1,145,805,020	\$ 959,582,052	\$ 1,393,773,199
b. Ratio to Current Valuation Assumptions	n/a	83.75%	121.64%
2 Plan Fiduciary Net Position as of Year End June 30, 2024			
a. Plan Fiduciary Net Position	\$ 15,633,776	\$ 15,633,776	\$ 15,633,776
b. Ratio to Current Valuation Assumptions	n/a	100.00%	100.00%
3 Net OPEB Liability as of Year End June 30, 2024			
a. OPEB Liability: (1a) - (2a)	\$ 1,130,171,244	\$ 943,948,276	\$ 1,378,139,423
b. Ratio to Current Valuation Assumptions	n/a	83.52%	121.94%

Note: Sensitivity analysis for healthcare cost inflation (trend) rate is illustrated as of end of year.



SECTION I: GASB NO. 74/75 REPORTING TO YEAR END JUNE 30, 2024 REPORTING (CONTINUED)

(Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018)

Section F: Summary of Deferred Inflows & Outflows for 2023 Plan Year Valuation Only

	<u>Deferred Outflows</u>	<u>Deferred Inflows</u>
1 Difference Between Expected and Actual Experience (Page 2, Line 2d)	\$ -	\$ -
2 Net Difference Between Expected and Actual Earnings on OPEB Investments	\$ -	\$ 19,292
3 Impact due to Changes in Assumptions (Page 2, Line 2e) (See Note below)	\$ -	\$ 160,141,158
4 Total for 2023 Plan Year Valuation: (1) + (2) + (3)	\$ -	\$ 160,160,450

Note 1:

The deferred inflow (actuarial gain) of \$19,292 in line 2 above reflects the net difference between expected and actual earnings on OPEB investments during the fiscal year.

Note 2:

The deferred inflow (actuarial gain) of \$160.141 million in line 3 above is driven by reductions in starting claims cost and trend (i.e., favorable premium rate changes since prior valuation) plus change in discount rate assumption from 4.00% to 4.09%.

Section G: Amortization of Deferred Inflows & Outflows for 2023 Plan Year Valuation Only

1 Amortization of Difference Between Expected and Actual Experience		
a. Difference Between Expected and Actual Experience: (Section F, Line 1)	\$	-
b. Amortization Period in Years: Average Expected Future Working Lifetime		7.670 Years
c. Annual Amortization Payment for Current Period: (1a) / (1b)	\$	-
d. Remaining 2023 Balance as of the end of the Fiscal Year: (1a) - (1c)	\$	-
2 Amortization of Net Difference Between Expected and Actual Earnings on OPEB Investments		
a. Difference Between Expected and Actual Earnings: (Section F, Line 2)	\$	(19,292)
b. Amortization Period in Years (Five Years)		5.000 Years
c. Annual Amortization Payment: (2a) / (2b)	\$	(3,858)
d. Remaining 2023 Balance as of the end of the Fiscal Year: (2a) - (2c)	\$	(15,434)
3 Amortization of Impact due to Changes in Assumptions		
a. Impact due to Changes in Assumptions: (Section F, Line 3)	\$	(160,141,158)
b. Amortization Period in Years: Average Expected Future Working Lifetime		7.670 Years
c. Annual Amortization Payment: (3a) / (3b)	\$	(20,878,899)
d. Remaining 2023 Balance as of the end of the Fiscal Year: (3a) - (3c)	\$	(139,262,259)

Note:

See pages 5-6, section H for historical schedule of amortization payments.



SECTION I: GASB NO. 74/75 REPORTING TO YEAR END JUNE 30, 2024 REPORTING (CONTINUED)

(Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018)

Section H: Amortization Schedule of Deferred Inflows & Outflows as of Year End June 30, 2024

	Amortized Item	Initial Year	Amortization Period	Initial Balance	Beginning of Year Unamortized Balance	Amortization Amount for FY End 6/30/24	End of Year Unamortized Balance
1	Deferred Outflows Change in Assumptions - Note 1	FY End 6/30/19	7.11	\$ 111,439,575	\$ 33,071,380	\$ 15,673,639	\$ 17,397,741
2	Deferred Outflows Change in Assumptions - Note 2	FY End 6/30/20	7.11	\$ 85,218,777	\$ 37,275,725	\$ 11,985,763	\$ 25,289,962
3	Deferred Outflows Change in Assumptions - Note 3	FY End 6/30/21	7.11	\$ 123,666,366	\$ 71,486,466	\$ 17,393,300	\$ 54,093,166
4	Deferred Outflows Net Difference b/t Expected and Actual Earnings on OPEB Investments - Note 4	FY End 6/30/22	5.00	\$ 336,160	\$ 201,696	\$ 67,232	\$ 134,464
5	Deferred Inflows Change in Assumptions - Note 5	FY End 6/30/22	7.42	\$ (448,689,569)	\$ (327,748,985)	\$ (60,470,292)	\$ (267,278,693)
6	Deferred Outflows Net Difference b/t Expected and Actual Earnings on OPEB Investments - Note 6	FY End 6/30/23	5.00	\$ 185,479	\$ 148,383	\$ 37,096	\$ 111,287
7	Deferred Inflows Change in Assumptions-Note 7	FY End 6/30/23	7.42	\$ (55,153,358)	\$ (47,720,291)	\$ (7,433,067)	\$ (40,287,224)
8	Deferred Inflows Net Difference b/t Expected and Actual Earnings on OPEB Investments - Note 8	FY End 6/30/24	5.00	\$ (19,292)	\$ (19,292)	\$ (3,858)	\$ (15,434)
9	Deferred Inflows Change in Assumptions - Note 9	FY End 6/30/24	7.67	\$ (160,141,158)	\$ (160,141,158)	\$ (20,878,899)	\$ (139,262,259)
10	Totals			\$ (343,157,020)	\$ (393,446,076)	\$ (43,629,086)	\$ (349,816,990)
11	Liability: Change in Assumptions Deferred Inflows and Outflows					\$ (43,729,556)	\$ (350,047,307)
12	Asset: Net Difference b/t Expected and Actual Deferred Inflows and Outflows					\$ 100,470	\$ 230,317
13	Subsequent Benefit Payments for July 1, 2024 to June 30, 2025						\$ 38,741,036



SECTION I: GASB NO. 74/75 REPORTING TO YEAR END JUNE 30, 2024 REPORTING (CONTINUED)

(Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018)

Section H: Amortization Schedule of Deferred Inflows & Outflows as of Year End June 30, 2024 (Continued)

- Note 1 Change in assumptions deferred outflows (actuarial loss) as reported in FY 7/1/18 to 6/30/19 roll forward report, primarily driven by change in discount rate assumption from 3.50% to 3.10%.
- Note 2 Change in assumptions deferred outflows (actuarial loss) during FY 7/1/19 to 6/30/20 due to change in discount rate assumption from 3.10% to 2.44% and updated mortality table (SOA Pub-2010) and mortality improvement scale (SOA MP-2019). These liability increases are partially offset by reductions in starting claim cost (i.e., favorable premium rate increases).
- Note 3 Change in assumptions deferred outflows (actuarial loss) as reported in FY 7/1/20 to 6/30/21 roll forward report, primarily driven by change in discount rate assumption from 2.44% to 2.09%.
- Note 4 Net difference between expected and actual earnings on OPEB plan investments during FY 7/1/21 to 6/30/22 based on expected earnings of 3.33% versus actual losses of approximately -5.70%.
- Note 5 Change in assumptions deferred inflows (actuarial gain) during FY 7/1/21 to 6/30/22 due to change in discount rate assumption from 2.09% to 3.77% along with reductions in starting claim cost and trend (i.e., favorable premium rate increases.)
- Note 6 Net difference between expected and actual earnings on OPEB plan investments during FY 7/1/22 to 6/30/23 based on expected earnings of 3.33% versus actual gains of approximately 1.14%.
- Note 7 Change in assumptions deferred inflows (actuarial gain) as reported in FY 7/1/22 to 6/30/23 roll forward report, driven by change in discount rate assumption from 3.77% to 4.00%.
- Note 8 Net difference between expected and actual earnings on OPEB plan investments during FY 7/1/23 to 6/30/24 based on expected earnings of 5.03% versus actual gains of approximately 5.20%.
- Note 9 Change in assumptions deferred inflows (actuarial gain) as reported in FY 7/1/23 to 6/30/24 valuation report, driven by change in discount rate assumption from 4.00% to 4.09% plus reductions in starting claims cost and trend (i.e., favorable premium rate changes since prior valuation).

Balances at Fiscal Year Ending June 30, 2024	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	\$ -	\$ -
Net Difference between Expected and Actual Earnings on OPEB Investments	\$ 245,751	\$ 15,434
Changes in Assumptions or Other Inputs	\$ 96,780,869	\$ 446,828,176
Total	\$ 97,026,620	\$ 446,843,610



SECTION I: GASB NO. 74/75 REPORTING TO YEAR END JUNE 30, 2024 REPORTING (CONTINUED)

(Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018)

Section I: Projection of Deferred Inflows & Outflows Balances by Measurement Period and Fiscal Year End

Fiscal Year Ending June 30,	Net Difference between Expected and Actual Earnings on OPEB Investments			Change in Assumptions or Other Inputs		
	Beginning of Year Unamortized Balance	Recognition of OPEB Amortization Expense	End of Year Unamortized Balance	Beginning of Year Unamortized Balance	Recognition of OPEB Amortization Expense	End of Year Unamortized Balance
2024	\$ 330,787	\$ 100,470	\$ 230,317	\$ (393,776,863)	\$ (43,729,556)	\$ (350,047,307)
2025	\$ 230,317	\$ 100,470	\$ 129,847	\$ (350,047,307)	\$ (43,729,556)	\$ (306,317,751)
2026	\$ 129,847	\$ 100,470	\$ 29,377	\$ (306,317,751)	\$ (57,679,093)	\$ (248,638,658)
2027	\$ 29,377	\$ 33,237	\$ (3,860)	\$ (248,638,658)	\$ (70,070,522)	\$ (178,568,136)
2028	\$ (3,860)	\$ (3,860)	\$ -	\$ (178,568,136)	\$ (86,868,992)	\$ (91,699,144)
2029	\$ -	\$ -	\$ -	\$ (91,699,144)	\$ (53,709,491)	\$ (37,989,653)
2030	\$ -	\$ -	\$ -	\$ (37,989,653)	\$ (24,000,788)	\$ (13,988,865)
2031	\$ -	\$ -	\$ -	\$ (13,988,865)	\$ (13,988,865)	\$ -

Fiscal Year Ending June 30,	CONSOLIDATED		
	Beginning of Year Unamortized Balance	Recognition of OPEB Amortization Expense	End of Year Unamortized Balance
2024	\$ (393,446,076)	\$ (43,629,086)	\$ (349,816,990)
2025	\$ (349,816,990)	\$ (43,629,086)	\$ (306,187,904)
2026	\$ (306,187,904)	\$ (57,578,623)	\$ (248,609,281)
2027	\$ (248,609,281)	\$ (70,037,285)	\$ (178,571,996)
2028	\$ (178,571,996)	\$ (86,872,852)	\$ (91,699,144)
2029	\$ (91,699,144)	\$ (53,709,491)	\$ (37,989,653)
2030	\$ (37,989,653)	\$ (24,000,788)	\$ (13,988,865)
2031	\$ (13,988,865)	\$ (13,988,865)	\$ -



SECTION I: GASB NO. 74/75 REPORTING TO YEAR END JUNE 30, 2024 REPORTING (CONTINUED)

(Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018)

Section J: Summary of OPEB Plan Investment Returns during Fiscal Year July 1, 2023 to June 30, 2024

Expected Return on Investment

1 Expected % Investment Return during Fiscal Year		5.03%	
2 Plan Fiduciary Net Position at Beginning of Year	\$	13,001,659	
3 Contributions to OPEB Trust During the Fiscal Year			
		<u>Amount</u>	<u>Date Deposited</u>
A. Contribution #1 to OPEB Trust, excluding Pay-As-You-Go:	\$	1,931,780	12/6/2023
4 OPEB Trust Administrative Fee (20 basis points)	\$	(28,635)	
5 Plan Fiduciary Net Position at End of Year	\$	15,633,776	
6 Actual Investment Return in Dollars: (5) - (2) - (3A) - (4)	\$	728,972	
7 Expected Investment Return in Dollars based on Expected % Investment Return (Line 1)	\$	<u>709,680</u>	
8 Net Difference Between Expected and Actual Earnings on OPEB Investments: (7) - (6)	\$	(19,292)	
* [Used on page 4 of report]			
9 Annual money-weighted rate of return, net of investment expense			5.20%

Note: No withdrawals from the OPEB Trust are assumed for payment of OPEB benefits during the fiscal year.



SECTION II - SUMMARY OF FINANCIAL INFORMATION INCLUDING SENSITIVITY ANALYSIS

Summary of Financial Results with Sensitivity Analysis
(July 1, 2023 Valuation Date)

	Base Scenario Val. Discount Rate of <u>4.09%</u>	Sensitivity Analysis Val. Discount Rate of <u>5.09%</u>	Sensitivity Analysis Val. Discount Rate of <u>3.09%</u>	Healthcare Cost Trend Rate Assumptions <u>Increased 1%</u>	Healthcare Cost Trend Rate Assumptions <u>Decreased 1%</u>
1 Total Employee Lives					
a. Actives	5,926	5,926	5,926	5,926	5,926
b. Retirees	3,872	3,872	3,872	3,872	3,872
c. Subtotal	9,798	9,798	9,798	9,798	9,798
2 Present Value of Future Benefits (PVFB) as of July 1, 2023					
a. Actives	\$ 863,110,800	\$ 635,953,501	\$ 1,199,357,265	\$ 1,181,170,788	\$ 641,791,191
b. Retirees	\$ 630,705,595	\$ 566,811,717	\$ 708,256,433	\$ 700,110,750	\$ 572,105,601
c. Subtotal	\$ 1,493,816,395	\$ 1,202,765,218	\$ 1,907,613,698	\$ 1,881,281,538	\$ 1,213,896,792
d. % Actives as ratio of Subtotal	57.8%	52.9%	62.9%	62.8%	52.9%
e. Sensitivity Analysis of Subtotal: Ratio to Base Scenario for PVFB		80.5%	127.7%	125.9%	81.3%
3 Accrued Liability (AL) as of July 1, 2023					
a. Actives	\$ 475,032,393	\$ 370,355,601	\$ 619,957,995	\$ 631,254,005	\$ 363,425,286
b. Retirees	\$ 630,705,595	\$ 566,811,717	\$ 708,256,433	\$ 700,110,750	\$ 572,105,601
c. Subtotal	\$ 1,105,737,988	\$ 937,167,318	\$ 1,328,214,428	\$ 1,331,364,755	\$ 935,530,887
d. % Actives as ratio of Subtotal	43.0%	39.5%	46.7%	47.4%	38.8%
e. Sensitivity Analysis of Subtotal: Ratio to Base Scenario for AL		84.8%	120.1%	120.4%	84.6%
4 Assets as of July 1, 2023	\$ 13,001,659	\$ 13,001,659	\$ 13,001,659	\$ 13,001,659	\$ 13,001,659
5 Unfunded Accrued Liability (UAL) (3c) - (4)	\$ 1,092,736,329	\$ 924,165,659	\$ 1,315,212,769	\$ 1,318,363,096	\$ 922,529,228
6 Service Cost with Interest					
a. Service Cost at Year End:	\$ 34,271,406	\$ 26,062,060	\$ 45,583,995	\$ 47,384,683	\$ 25,217,009
b. Ratio to Valuation Results for Service Cost		76.0%	133.0%	138.3%	73.6%
7 Pay-As-You-Go Benefits - Illustrated as Projected	\$ 38,638,892	\$ 38,638,892	\$ 38,638,892	\$ 38,638,892	\$ 38,638,892
8 Ratio of AL to Pay-As-You-Go: (3c) / (7)	28.62	24.25	34.38	34.46	24.21
9 Ratio of Service Cost to Pay-As-You-Go: (6a) / (7)	0.89	0.67	1.18	1.23	0.65
10 Average Annual Pay-As-You-Go Benefit per Retiree (7) / (1b)	\$ 9,979	\$ 9,979	\$ 9,979	\$ 9,979	\$ 9,979
11 Three Year Projection of Pay-As-You-Go Costs					
a. Year 1: July 1, 2023 to June 30, 2024: (7)	\$ 38,638,892	\$ 38,638,892	\$ 38,638,892	\$ 38,638,892	\$ 38,638,892
b. Year 2: July 1, 2024 to June 30, 2025	\$ 38,741,036	\$ 38,741,036	\$ 38,741,036	\$ 38,914,996	\$ 38,566,291
c. Year 3: July 1, 2025 to June 30, 2026	\$ 39,707,869	\$ 39,707,869	\$ 39,707,869	\$ 40,635,053	\$ 38,793,665
12 Discount Rate	4.09%	5.09%	3.09%	4.09%	4.09%
13 Interest Cost for Fiscal Year July 1, 2023 to June 30, 2024 (3c) x (12) - (7) x (12) / 2; excludes interest on service cost	\$ 44,434,518	\$ 46,718,457	\$ 40,444,855	\$ 53,662,653	\$ 37,473,048
14 Accrued Liability (AL) as of June 30, 2024 (3c) + (6a) - (7) + (13)	\$ 1,145,805,020	\$ 971,308,943	\$ 1,375,604,386	\$ 1,393,773,199	\$ 959,582,052
15 Assets as of June 30, 2024	\$ 15,633,776	\$ 15,633,776	\$ 15,633,776	\$ 15,633,776	\$ 15,633,776
16 Unfunded Accrued Liability (UAL) as of June 30, 2024 (14) - (15)	\$ 1,130,171,244	\$ 955,675,167	\$ 1,359,970,610	\$ 1,378,139,423	\$ 943,948,276
17 Present Value of Future Benefits (PVFB) as of June 30, 2024 (2c) x [1 + (12)] - (7) x [1 + (12) / 2]	\$ 1,515,484,428	\$ 1,224,363,716	\$ 1,927,323,098	\$ 1,918,796,896	\$ 1,224,116,113

Note: All costs are net of retiree contributions. See pages 1-6 for financial statement information, including discount rate and trend scenarios for reporting under GASB75.



SECTION III - SUMMARY OF CENSUS INFORMATION

Summary of Retiree Enrollment, by Age Band and Gender, calculated as of July 1, 2023

<u>Age Band</u>	<u>City</u>	<u>School</u>	<u>Total</u>	<u>% City</u>	<u>% Total</u>
Under 50	40	4	44	90.9%	1.1%
50 to 54	59	3	62	95.2%	1.6%
55 to 59	126	45	171	73.7%	4.4%
60 to 64	197	160	357	55.2%	9.2%
65 to 69	333	337	670	49.7%	17.3%
70 to 74	348	527	875	39.8%	22.6%
75 to 79	319	459	778	41.0%	20.1%
80 to 84	190	274	464	40.9%	12.0%
85 to 89	125	143	268	46.6%	6.9%
90 to 94	64	72	136	47.1%	3.5%
95 +	<u>29</u>	<u>18</u>	<u>47</u>	<u>61.7%</u>	<u>1.2%</u>
Subtotal	1,830	2,042	3,872	47.3%	100.0%

	<u>City</u>	<u>School</u>	<u>Total</u>	<u>% City</u>	<u>% Total</u>
Pre 65 Retirees	422	212	634	66.6%	16.4%
Post 65 Retirees	<u>1,408</u>	<u>1,830</u>	<u>3,238</u>	<u>43.5%</u>	<u>83.6%</u>
Subtotal	1,830	2,042	3,872	47.3%	100.0%

	<u>City</u>	<u>School</u>	<u>Total</u>	<u>% City</u>	<u>% Total</u>
Female	692	1,556	2,248	30.8%	58.1%
Male	<u>1,138</u>	<u>486</u>	<u>1,624</u>	<u>70.1%</u>	<u>41.9%</u>
Subtotal	1,830	2,042	3,872	47.3%	100.0%

	<u>City</u>	<u>School</u>	<u>Total</u>
Average Age - Pre 65	57.5	60.8	58.6
Average Age - Post 65	75.9	75.9	75.9
Average Age - Total	71.7	74.4	73.1

Note:

Counts above include retiree counts only with spouses connected to the retiree and reflected through family coverage. In addition, counts include 361 surviving spouses.



SECTION III - SUMMARY OF CENSUS INFORMATION (CONTINUED)

Summary Active Employees by Age Band and Years of Service, calculated as of July 1, 2023

<u>Age Band</u>	<u>Years of Service</u>								<u>Subtotal</u>	<u>% Subtotal</u>
	<u>0 to 4</u>	<u>5 to 9</u>	<u>10 to 14</u>	<u>15 to 19</u>	<u>20 to 24</u>	<u>25 to 29</u>	<u>30 to 34</u>	<u>35 +</u>		
Under 25	345	-	-	-	-	-	-	-	345	5.8%
25 to 29	623	78	-	-	-	-	-	-	701	11.8%
30 to 34	591	267	21	1	-	-	-	-	880	14.8%
35 to 39	460	182	94	38	-	-	-	-	774	13.1%
40 to 44	388	134	74	118	7	-	-	-	721	12.2%
45 to 49	260	107	71	77	39	12	-	-	566	9.6%
50 to 54	281	119	64	97	43	99	26	1	730	12.3%
55 to 59	200	93	62	91	38	81	38	13	616	10.4%
60 to 64	109	65	43	69	35	28	29	15	393	6.6%
Age 65 +	<u>40</u>	<u>30</u>	<u>25</u>	<u>41</u>	<u>20</u>	<u>23</u>	<u>13</u>	<u>8</u>	<u>200</u>	<u>3.4%</u>
Subtotal	3,297	1,075	454	532	182	243	106	37	5,926	100.0%
% Subtotal	55.6%	18.1%	7.7%	9.0%	3.1%	4.1%	1.8%	0.6%	100.0%	

<u>Actives</u>	<u>City</u>	<u>School</u>	<u>Total</u>
Average Age:	40.4	43.7	42.4
Average Years of Service:	5.2	8.0	6.9

<u>Count by Gender</u>	<u>City</u>	<u>School</u>	<u>Total</u>	<u>% City</u>	<u>% Total</u>
Female	958	2,750	3,708	25.8%	62.6%
Male	<u>1,300</u>	<u>918</u>	<u>2,218</u>	<u>58.6%</u>	<u>37.4%</u>
Subtotal	2,258	3,668	5,926	38.1%	100.0%

<u>Actives by Service Category</u>	<u>City</u>	<u>School</u>	<u>Total</u>	<u>% City</u>	<u>% Total</u>
Actives Not Yet Eligible for Benefits	2,016	3,035	5,051	39.9%	85.2%
Actives Eligible for Benefits	<u>242</u>	<u>633</u>	<u>875</u>	<u>27.7%</u>	<u>14.8%</u>
Total	2,258	3,668	5,926	38.1%	100.0%
% Actives Eligible for Benefits	10.7%	17.3%	14.8%		

Note:

Active count above includes 1,681 active employees that currently opt-out of coverage. For valuation purposes, it is assumed that 100% of these employees elect coverage in retirement with 60% electing single coverage similar to the current retiree distribution. All opt-outs are assumed to have a plan cost equivalent to the enrollment weighted average of the plan options available to pre-65 and post-65 retirees.



SECTION III - SUMMARY OF CENSUS INFORMATION (CONTINUED)

Comparison of Census Information to the Prior Valuation

	<u>July 1, 2023</u>	<u>July 1, 2021</u>	<u>Difference</u>	<u>% Difference</u>
<u>Summary of Counts</u>				
Actives	5,926 ⁽¹⁾	5,680 ⁽³⁾	246	4.3%
Retirees	<u>3,872</u> ⁽²⁾	<u>3,933</u> ⁽⁴⁾	<u>(61)</u>	<u>-1.6%</u>
Total	9,798	9,613	185	1.9%
Retiree Counts - % Pre-65	16.4%	17.8%	-1.4%	-7.9%
o Actives - Valuation Age	42.4	42.6	(0.2)	-0.5%
o Pre-65 Retirees	58.6	59.0	(0.4)	-0.7%
o Post-65 Retirees	75.9	75.7	0.2	0.3%
o Total Retirees	73.1	72.7	0.4	0.6%
<u>Actives Avg. Years of Service</u>	6.9	7.3	(0.4)	-5.5%
<u>Actives Eligible for Benefits</u>				
o Total	875	999	(124)	-12.4%
% Eligible for Benefits	14.8%	17.6%	-2.8%	-15.9%
<u>Gender</u>				
% Female - Active	62.6%	61.8%	0.8%	1.3%
% Female - Retiree	58.1%	58.3%	-0.2%	-0.3%
<u>Coverage Tier</u>				
% Single - Active	53.1%	51.9%	1.2%	2.3%
% Single - Retiree	59.5%	59.1%	0.4%	0.7%

Notes:

⁽¹⁾ Current active count includes 1,681 employees waiving coverage.

⁽²⁾ Current retiree count includes 361 surviving spouses.

⁽³⁾ Prior active count included 1,430 employees waiving coverage.

⁽⁴⁾ Prior retiree count included 352 surviving spouses.



SECTION IV - SUMMARY OF ASSUMPTIONS

Municipality	City of Springfield		
Valuation Date	July 1, 2023		
Initial Implementation Year for GASB No. 74/75	Implementation Year for GASB 74/75 is July 1, 2017 to June 30, 2018		
	Effective for fiscal years beginning after June 15, 2017, the City is required to reflect the impact of GASB Statements 74/75. The impact to financial statements as a result of these new GASB Statements include, but are not limited to, the amount of the OPEB liability to be reported on the financial statements, the selected actuarial cost method, discount rate used, and disclosures in the audited financial statements. Details are described throughout the report.		
Purpose of Work	This report is provided to your organization for the purpose of calculation results under GASB No. 74/75. Information in this report may not be appropriate to use for other purposes. Aquarius does not intend to benefit from the overall results of the report and we assume no duty, liability or obligation to parties that use this work for reasons other than its intention, i.e., reporting of GASB No. 74/75 for financial statements. Pages 1-8 reflect results under GASB No. 74/75. GASB No. 75 replaces GASB No. 45.		
Assets	Assets are placed in an irrevocable OPEB Trust with the balance of \$13,001,659 reflected in the valuation as reported in the audited financial statements as of year-end June 30, 2023. In addition, the City provided the asset valuation balance as of year-end June 30, 2024, of \$15,633,776. Section IX, page 21 includes the forecast of the OPEB trust investment balance.		
Asset Allocation	Assets in the OPEB Trust are invested with UBS, PeoplesBank, and Flynn Financial Partners and have the following target allocation by asset class:		
	<u>Asset Class</u>	<u>Target Allocation</u>	<u>Expected Rate of Return</u>
	PeoplesBank CD	31.00%	5.00%
	U.S. Treasuries	46.00%	5.00%
	Fixed Income	16.00%	3.00%
	Equities	<u>7.00%</u>	<u>10.00%</u>
	Total/Composite	100.00%	5.03%
Expected Return on Assets	Based on information provided by the City, the estimated long-term net return on investments is approximately 5.03%. Section IX, page 21 includes the forecast of the OPEB trust investment balance.		
	The prior expected rate of return on assets used in the July 1, 2022 to June 30, 2023 GASB 74/75 report was 3.33%.		
Discount Rate	4.09% as of June 30, 2024 End of Year Measurement Date		
	The single discount rate is a blend of the annual expected long-term rate of return on OPEB investments of 5.03% for the first 0.5 years of "funded" benefit payments beginning July 1, 2024, and the prescribed discount interest rate for the "unfunded" portion of future benefit payments using the average yield of two 20-year municipal bond indices (e.g., S&P Municipal Bond 20 Year High Grade Rate Index - 4.21% and Fidelity GO AA 20 Years - 3.97%) of 4.09% measured at June 30, 2024.		
	The illustration of the single discount rate calculation can be found in section X, page 22 of this report. The prior single discount rate used in July 1, 2022 to June 30, 2023 GASB 74/75 report was 4.00%.		
Information for Valuation	All information was provided by the City.		
Retirement Benefits	Coverage for pre-65 and post-65 retirement benefits. This valuation is provided to a single employer plan.		
Covered Benefits	Medical coverage, including prescription drugs as part of the medical plan, is offered to pre-65 and post-65 retirees through the Commonwealth of Massachusetts Group Insurance City (GIC) on a fully insured basis. Dental/vision coverage is also offered to retirees through Cigna. A list of GIC plans and their associated premiums can be found in Section VI, page 16 of this report.		
	Group life insurance benefit of \$2,000 is provided to retirees. The City contributes 50% of this benefit.		
Insurance Coverage and Funding Basis	Medical, including prescription drugs, is fully insured through the GIC. Dental/vision coverage is fully insured through Cigna.		
Actuarial Cost Method	Entry Age Normal as a Level Percentage of Payroll		
Health Care Cost Trend Assumption	The following assumptions are used for annual healthcare cost inflation (trend):		
	<u>Year</u>	<u>Pre-65</u>	<u>Post 65</u>
Year 1 Trend	July 1, 2025	7.00%	7.00%
Ultimate Trend	July 1, 2035 & Later	4.50%	4.50%
Grading Per Year		0.25%	0.25%



SECTION IV - SUMMARY OF ASSUMPTIONS (CONTINUED)

Starting Claim Cost	<p>Base plan costs effective July 1, 2023 and July 1, 2024 are based on GIC fully insured premium rates and are illustrated, by coverage tier in Section VI, page 18 of this report. These rates are illustrated before retiree contributions, adjustments for aging, and implicit subsidies, and are assumed to include all administrative expenses and PPACA fees.</p> <p>Plan costs effective July 1, 2025 and beyond are trended forward using the trend rates illustrated under the "Health Care Cost Trend Assumptions" section above.</p>
Projected Benefit Costs	<p>While the plans within the GIC are assumed to be community rated, Actuarial Standards of Practice No. 6 requires age adjusted costs be measured by estimating the expected costs by age whether or not a pooling or community rating applies. The current valuation contemplates an assumption for aging, which is consistent with the prior valuation.</p>
Medicare Part B Reimbursements	<p>The City does not reimburse Medicare Part B premiums to retirees and/or spouses that are eligible.</p>
Medicare Part D Reimbursements	<p>The City does not reimburse Medicare Part D premiums to retirees and/or spouses that are eligible.</p>
Implicit Subsidy	<p>This reflects the difference between the premium rate or cost charged to a retiree for a particular benefit as compared to the estimated rate of cost to the retiree, if those benefits were calculated reflecting retirees as a separate group (rather than their costs bundled with the active population). The results in this valuation reflect an implicit subsidy in the cost projections.</p>
Healthcare Reform Impact	<p>The Patient Protection and Affordable Care Act (PPACA) enacted in March 2010 (Healthcare Reform) includes several fees and/or taxes levied on employer groups either directly (e.g., self-funded employer groups which calculates and pays the fees directly) or indirectly (e.g., fully insured employer groups in which the health insurer pays and passes on to the group in their premium rates.) The fees included in this valuation are 1) Comparative Effectiveness Research fee (aka PCORI), 2) Health Insurance Industry fee, and 3) High Cost Plans Excise Tax ("Cadillac tax"). The Reinsurance Assessment, also initiated with the passing of the PPACA, was a short-term fee levied on fully insured and self-funded employer groups between 2014 - 2016.</p> <p>The Comparative Effectiveness Research fee runs through 2029 and is tax deductible. The initial fee was \$1 per participant per year increasing to \$2 in the next year. Subsequent years are increased based on medical inflation. The fee applies to post-65 retirees where Medicare is the primary payer. Initially, this fee was to expire in 2019, however, legislation signed into law by President Trump on December 20, 2019 HR 1865 "Further Consolidated Appropriations Act, 2020" extended the fee 10 years.</p> <p>The Health Insurance Industry fee is based on targeted fixed fees to be paid by the health insurance industry and is not tax deductible. The total fee amount to be paid by health insurers starts at \$8 billion in 2014 and increases to \$14.3 billion in 2018. After 2018, the fee increases annually based on premium growth. The fee was suspended for the 2017 plan year and resumed in 2018 with the estimated fee to be approximately 3.0% to 4.0% of premium. The fee applies to fully insured plans including Medicare Advantage plans and excludes self-funded employer sponsored group health plans. Effective with legislation passed on January 22, 2018, this fee was suspended again for the 2019 plan year and will resume in 2020, however has been repealed beginning 2021 and beyond based on 12/20/19 HR 1865 "Further Consolidated Appropriations Act, 2020".</p> <p>The High Cost Plans Excise tax included a 40% tax ("Cadillac tax") on high cost plans to be levied on insurers and third party administrators (TPA) beginning in 2022 and was to be tax deductible. The calculation was to be done separately for single and family coverage and was equal to 40% of the excess of per employee plan costs, net of patient cost sharing, over the 2022 stated cost limits of:</p> <ul style="list-style-type: none"> o - \$10,200 single / \$27,500 family o - \$11,850 single / \$30,950 family for retirees age 55-64 <p>This valuation excludes the Cadillac tax in its entirety based on legislation signed into law by President Trump on 12/20/19, HR 1865 "Further Consolidated Appropriations Act, 2020" repealing the "Cadillac Tax".</p>
COVID-19 Pandemic	<p>No special adjustments or considerations were made to valuation results due to the COVID-19 pandemic. No special considerations were made for COVID-19's impact on assets within the OPEB trust. Similarly, no special adjustments were made to the OPEB liability calculations. The impact of COVID-19 will be reviewed in future years including the potential impact on selected assumptions (e.g., mortality, morbidity, etc.).</p>
Plan Design Changes	<p>Valuation assumes no changes in future plan designs (e.g., deductibles, coinsurance, etc.) from current benefits offered for the current plan year. It is assumed that the current level of benefits will remain, with no modifications to avoid the potential excise tax imposed by the Patient Protection and Affordable Care Act (PPACA) described in detail above.</p>
% Future Retirees Opting Out	<p>It is assumed that 100% of future retirees (active employees) eligible for coverage will elect benefits in retirement. All eligible active and retiree employee records provided by the City were valued.</p>
Census Information	<p>Participant data was provided by the City in July 2024. We relied on information as being accurate and we have not conducted any data audits.</p>
New Hires	<p>This valuation is based on a closed group and does not reflect the impact of future new entrants (e.g., new hires after date of data collection, i.e., July 2024) into the plan.</p>



SECTION IV - SUMMARY OF ASSUMPTIONS (CONTINUED)

Payroll Information	Payroll information was reflected in the valuation for the actuarial cost method. Benefit and retiree contribution rates are not based on payroll so this information was not necessary for benefit or contribution rate calculations. Average salary increase used for the Entry Age Normal (EAN) actuarial cost method is assumed to be 3.0%. Payroll compensation is illustrated on page 1 of the report and reflects annual salary information as reported for each active employee.
Retirement System	<p>Employees of the City participate in the Springfield Retirement System (SRS) or the Commonwealth of Massachusetts Teachers' Retirement System (MTRS).</p> <p>The decrement tables used in this valuation for SRS are based on the most recent SRS Actuarial Valuation Report by the Public Employees Retirement Administration Commission (PERAC) dated January 1, 2022. The decrement tables used for MTRS are based on the most recent Commonwealth Actuarial Valuation Report by PERAC dated January 1, 2023.</p>
Retirement Eligibility Assumptions	<p>For employees hired prior to April 2, 2012 the eligibility for retirement is based on meeting a criteria of minimum age and/or years of service (YOS) requirement. Retirees are eligible for medical benefits based on reaching the earlier of age 55 with 10 YOS or 20 YOS with no minimum age requirement.</p> <p>For Group 1 employees hired on or after April 2, 2012, Chapter 176 of the Acts of 2011 changed the retirement eligibility to a minimum age of 60 with 10 YOS. Retirement eligibility for Group 4 employees remain the earlier of age 55 with 10 YOS or 20 YOS with no minimum age requirement.</p>
Retiree Contribution Rates	<p>The City contributes 75% of costs of medical and dental/vision benefits for pre-65 and post-65 retirees and their surviving spouses for all plan options, employee groups and coverage tiers.</p> <p>The City contributes 50% of the cost of the basic group life insurance benefit.</p>
Mortality	Society of Actuaries Pub-2010 Public Retirement Plans Healthy Male and Female Total Dataset Headcount-Weighted Mortality tables based on Employee and Healthy Annuitant Tables for both pre and post retirement projected with mortality improvements using the most current Society of Actuaries Mortality Improvement Scale MP-2021.
Turnover Assumptions	This reflects rate of separation from the active plan and excludes retirement and disability. Turnover tables vary by age, gender and years of service with rates of turnover based on the SRS/PERAC.
Disability Assumptions	This reflects disability assumptions from the active plan and is based on age and gender. This is the assumption used for the SRS/PERAC.
Retirement Assumptions	This reflects rate of retirement from the active plan and is based on age, gender and years of service. This is the assumption used for the SRS/PERAC.
Surviving Spouses & Surviving Dependents	Surviving dependents who elect coverage pay the same as retirees as outlined above. The valuation includes 361 surviving spouses receiving benefits.
Valuation of Spouses & Marital Status	<p>Spouses are valued for benefits similar to retired employees. Employees with spouses are assumed to be married to those spouses at and throughout retirement. Employees that are without spouses (or not covering a spouse) are assumed to be single at and throughout retirement. Based on the contribution rates for future retirees, it is assumed that active employees with dependent coverage will elect dependent coverage in retirement 100% of the time.</p> <p>Retiree counts include counts of retiree only with spouses connected to the retiree reflected through family coverage.</p>
Spouse Age Assumptions	It is assumed that female spouses are three years younger than male employees and male spouses are three years older than female employees unless actual spouse date of birth information was provided. Spousal dates of birth were provided and reflected in the valuation when available.
Waivers & Buyouts	<p>Valuation includes 1,681 active employees who opt-out of medical coverage. For valuation purposes, it is assumed that 100% of these employees elect coverage in retirement. As spousal information was not provided for these individuals, it is assumed that 60% elect single coverage in retirement, which is consistent with the distribution of current pre-65 and post-65 retirees electing coverage.</p> <p>All opt-outs are assumed to have a plan cost equivalent to the enrollment weighted average of the plan options available to pre-65 and post-65 retirees.</p>
Vested & Leave of Absence	No individuals on the census are listed as vested in benefits or on leave of absence.
COBRA & Terminated Participants	No individuals on the census are listed on Cobra or terminated from the plan.
Eligible Population	Population reflects all benefit eligible employees provided. New hires after date of data collection are not reflected herein.



SECTION IV - SUMMARY OF ASSUMPTIONS (CONTINUED)

Missing Census Information

- o Dates of Birth One (1) new active employee was missing date of hire, so assumed the average hire age of 35 for the group.
- o Dates of Hire No active employees were missing date of hire, so no special adjustments needed.
- o Gender No individuals were missing gender, so no special adjustments were needed.
- o Coverage Tier No individuals electing coverage were missing coverage tier, so no adjustments required. For individuals waiving coverage, it is assumed that 60% elect single coverage in the future, consistent with the current retiree distribution.
- o Status No individuals required modifications to their active/retired status.
- o Salary Twelve (12) active employees were missing salary so based salary on average of employees unit. Salary information was provided by individual and reflected in the valuation for use with the actuarial cost method.

Special Adjustments No other special adjustments were provided since client data was complete for purposes of completing the valuation. All active and retired employees provided were valued.

Medicare Tax Subsidy The Medicare tax subsidy is not reflected in valuation. There is no offset in premium rates charged to employer and post-65 costs are illustrated gross of subsidy.

Rounding of Results Results are illustrated to the nearest dollar. In using unrounded results (exact dollars), no implication is made as to the degree of precision in those results. Clients and their auditors should apply their own judgement as to the desirability of rounding when transferring results from this valuation report to the client's financial statements.

Employee Contracts & Collective Bargaining Agreements Employee contracts and collective bargaining agreements specific to retiree benefits were reviewed to the extent available. Results are based on information as provided by the organization.

A summary of benefits and eligibility are provided in this report for illustrative purposes in order to understand the types of benefits reflected in the valuation. We recommend reviewing your organization's plan document for details on eligibility and covered benefits. Information in this report should not be used instead of the plan document and/or summary plan description.

Initial Year of Recognition of GASB No. 43/45 & 74/75 We have not reviewed the audited financials of client so are not providing an opinion on when client should recognize and comply with GASB 43/45 & 74/75. We rely on the opinion of your organization and auditor for this determination.

Other Comments Actuarial methods, considerations, and analyses used in forming this certification conform to the appropriate Standards of Practice and guidelines of the Actuarial Standards Board (ASB).



SECTION V - DEFINITIONS & GLOSSARY

Other Post Employment Benefits (OPEB)	Medical, dental, vision, life and other health benefits provided to terminated or retired employees including their dependents and beneficiaries.
Actuarial Present Value of Future Benefits (PVFB)	Present value of all benefits expected to be paid by the employer, net of expected retiree contributions, based on actuarial assumptions used in the valuation.
Accrued Liability (AL)	This is the past service liability or present value of all benefits earned to date. Since retiree medical benefits are not accrued based on a specific formula like a pension plan, the accounting standard requires the benefits to be earned ratably from date of hire to date of full eligibility for benefits. For retirees and actives that are immediately eligible to retire and receive full benefits, the AL equals the PVFB. For actives not yet eligible to retire, it equals a pro-rata portion of the PVFB based on past service to total service to retirement eligibility for that employee. This is consistent with the Total OPEB Liability under GASB 74 & 75 reporting.
Unfunded Accrued Liability (UAL)	This is the excess of the AL over Plan Fiduciary Net Position (OPEB trust assets). This would also be referred to as the Total Net OPEB Liability, reflecting the Total OPEB Liability less the Plan Fiduciary Net Position.
Actuarial Cost Method	A procedure for allocating the Actuarial Present Value of Future Benefits (PVFB) to time periods, usually in the form of Normal Cost and an Accrued Liability (AL). This actuarial cost method is prescribed under GASB 74 & 75.
Service Cost (Normal Cost)	The proportion of the PVFB of a plan's benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method used in the valuation. This is the cost of OPEB attributed to the current year of service.
Pay-As-You-Go	This is a method of financing a postretirement benefit plan under which the contributions to the plan are generally made at about the same time and amount as benefits and expenses become due.
Plan Fiduciary Net Position	The current market value of assets placed in an irrevocable OPEB trust.
Closed Group Valuation	This means that it does not consider the Actuarial PVFB associated with future entrants.
Decrement Rates	This includes mortality, turnover, disability and retirement rate assumptions. This is used to determine the likelihood of an employee qualifying for OPEB and when benefits will commence. Mortality is also used to determine probability of individuals to live and continue to receive benefits.
Covered Payroll	The payroll of the active employees that are provided OPEB benefits.
Discount Rate	Assumption used for converting present value of future benefits less future contributions into today's dollar amounts.
Projected Unit Credit	This is an actuarial cost method whereby the costs of benefits earned is funded each year and the value of the accrued liability reflects the benefits earned to date. This was the most common method used under GASB No. 45.
Individual Entry Age Normal	This is an actuarial cost method whereby costs are determined as of the entry age of the employee until his/her exiting of active service. This allocation can be done on a level dollar or level percentage of pay. This method is prescribed under GASB No. 75.
Deferred Inflows/Outflows of Resources	This reflects amounts resulting from experience gains/losses that have not been recognized in the current OPEB expense calculations, but will be potentially reflected in future years.
Plan Members	The individuals covered by the terms of an OPEB plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.
Substantive Plan	The terms of the OPEB plan as understood by the employer and its plan members. The plan is assumed to be a single employer plan unless noted otherwise in the report.
Recognition Year for GASB No. 74 & 75	The effective date for reporting GASB No. 74 is for fiscal years beginning after June 15, 2016. The effective date for reporting GASB No. 75 is for fiscal years beginning after June 15, 2017. GASB No. 74 & 75 replaced GASB No 43 & 45.



SECTION VI - SUMMARY OF CLAIM COST ASSUMPTIONS

Summary of Plan Costs by Year - Monthly Fully Insured Rates

<u>Retiree Group</u>	<u>Tier</u>	<u>Plan Year 7/23-6/24</u>	<u>Plan Year 7/24-6/25</u>	<u>7/23-o-7/22 % Change</u>
<i><u>Pre-65 Medical/Rx Plans:</u></i>				
Harvard Pilgrim Access America	Single	\$ 1,180.40	\$ 1,259.39	6.69%
	Family	2,629.04	2,809.26	6.85%
Harvard Pilgrim Quality	Single	\$ 721.33	\$ 788.04	9.25%
	Family	1,829.24	2,005.81	9.65%
Health New England	Single	\$ 735.00	\$ 778.25	5.88%
	Family	1,757.61	1,866.96	6.22%
Mass General Bringham	Single	\$ 892.50	\$ 977.66	9.54%
	Family	2,352.42	2,585.42	9.90%
Harvard Pilgrim Explorer	Single	\$ 976.42	\$ 1,067.87	9.37%
	Family	2,412.86	2,645.90	9.66%
Wellpoint Total Choice	Single	\$ 1,348.43	\$ 1,501.35	11.34%
	Family	2,983.18	3,331.72	11.68%
Wellpoint Community Choice	Single	\$ 676.74	\$ 744.97	10.08%
	Family	1,669.16	1,849.09	10.78%
Wellpoint PLUS	Single	\$ 883.99	\$ 958.62	8.44%
	Family	2,097.98	2,284.05	8.87%
<i><u>Post-65 Medical/Rx Plans:</u></i>				
Harvard Pilgrim Medicare Enhance	Per Participant	\$ 421.84	\$ 436.13	3.39%
Health New England MedPlus	Per Participant	\$ 430.29	\$ 438.79	1.98%
Tufts Health Plan Medicare Preferred	Per Participant	\$ 352.75	\$ 363.84	3.14%
Wellpoint Medicare Extension	Per Participant	\$ 425.11	\$ 444.68	4.60%
<i><u>Pre-65 & Post-65 Dental Plans:</u></i>				
Cigna Dental	Single	\$ 28.33	\$ 28.33	0.00%
	Family	65.56	65.56	0.00%
Basic Life Insurance (\$2,000)	Per Retiree	\$ 0.80	\$ 0.80	0.00%

Notes:

Pre-65 and post-65 retiree fully insured premium rates above are based on the Commonwealth of Massachusetts Group Insurance Commission rates for the effective dates indicated above and are based on 100% before retiree contributions. These premium rates are assumed to include all administrative costs and PPACA fees required at this time.



SECTION VII: TWENTY (20) YEAR FORECAST OF PAY-AS-YOU-GO COSTS AND TOTAL OPEB LIABILITY FOR CURRENT POPULATION

	[A]=[E(n-1)]	[B]=[B(n-1)]*(1+3%)	[C]=[Input]	[D]=4.09%*(A)-[C]*2)	[E]=[A]+[B]-[C]+[D]	[F]=[F(n-1)]*(1+5.03%)	[G]=[E]-[F]
<u>Fiscal Year</u>	<u>Total OPEB Liability at Beginning of Year</u>	<u>Annual Service Cost with Interest</u>	<u>Annual Projected PAYGO</u>	<u>Annual Interest Cost</u>	<u>Total OPEB Liability at End of Year</u>	<u>Plan Fiduciary Net Position at End of Year</u>	<u>NET OPEB Liability at End of Year</u>
1. Fiscal Year July 1, 2023 to June 30, 2024	\$1,105,737,988	\$ 34,271,406	\$ 38,638,892	\$44,434,518	\$1,145,805,020	\$ 15,633,776	\$1,130,171,244
2. Fiscal Year July 1, 2024 to June 30, 2025	1,145,805,020	35,299,548	38,741,036	46,071,171	1,188,434,703	16,420,155	1,172,014,548
3. Fiscal Year July 1, 2025 to June 30, 2026	1,188,434,703	36,358,534	39,707,869	47,794,953	1,232,880,321	17,246,089	1,215,634,232
4. Fiscal Year July 1, 2026 to June 30, 2027	1,232,880,321	37,449,290	40,341,131	49,599,829	1,279,588,309	18,113,567	1,261,474,742
5. Fiscal Year July 1, 2027 to June 30, 2028	1,279,588,309	38,572,769	41,374,997	51,489,043	1,328,275,124	19,024,679	1,309,250,445
6. Fiscal Year July 1, 2028 to June 30, 2029	1,328,275,124	39,729,952	42,516,864	53,456,983	1,378,945,195	19,981,620	1,358,963,575
7. Fiscal Year July 1, 2029 to June 30, 2030	1,378,945,195	40,921,851	44,173,570	55,495,509	1,431,188,985	20,986,695	1,410,202,290
8. Fiscal Year July 1, 2030 to June 30, 2031	1,431,188,985	42,149,507	45,452,138	57,606,133	1,485,492,487	22,042,326	1,463,450,161
9. Fiscal Year July 1, 2031 to June 30, 2032	1,485,492,487	43,413,992	47,156,182	59,792,299	1,541,542,596	23,151,055	1,518,391,541
10. Fiscal Year July 1, 2032 to June 30, 2033	1,541,542,596	44,716,412	49,076,608	62,045,476	1,599,227,876	24,315,553	1,574,912,323
11. Fiscal Year July 1, 2033 to June 30, 2034	1,599,227,876	46,057,904	51,928,371	64,346,485	1,657,703,894	25,538,625	1,632,165,269
12. Fiscal Year July 1, 2034 to June 30, 2035	1,657,703,894	47,439,641	53,420,215	66,707,646	1,718,430,966	26,823,218	1,691,607,748
13. Fiscal Year July 1, 2035 to June 30, 2036	1,718,430,966	48,862,830	54,498,985	69,169,322	1,781,964,133	28,172,426	1,753,791,707
14. Fiscal Year July 1, 2036 to June 30, 2037	1,781,964,133	50,328,715	55,668,771	71,743,907	1,848,367,984	29,589,499	1,818,778,485
15. Fiscal Year July 1, 2037 to June 30, 2038	1,848,367,984	51,838,576	56,899,030	74,434,665	1,917,742,195	31,077,851	1,886,664,344
16. Fiscal Year July 1, 2038 to June 30, 2039	1,917,742,195	53,393,733	58,487,335	77,239,590	1,989,888,183	32,641,067	1,957,247,116
17. Fiscal Year July 1, 2039 to June 30, 2040	1,989,888,183	54,995,545	60,457,247	80,150,076	2,064,576,557	34,282,913	2,030,293,644
18. Fiscal Year July 1, 2040 to June 30, 2041	2,064,576,557	56,645,411	62,465,035	83,163,771	2,141,920,704	36,007,344	2,105,913,360
19. Fiscal Year July 1, 2041 to June 30, 2042	2,141,920,704	58,344,773	64,974,845	86,275,821	2,221,566,453	37,818,513	2,183,747,940
20. Fiscal Year July 1, 2042 to June 30, 2043	2,221,566,453	60,095,116	66,682,536	89,498,410	2,304,477,443	39,720,784	2,264,756,659
21. Subtotal - Projected Pay-As-You-Go for Twenty Years: (1) + ... + (20)			\$1,012,661,657				

Notes:

1. Projections are based on the current census population and valuation assumptions. Group is assumed to be closed group with no new hires.
2. The above costs are net of retiree contribution rates.
3. Service cost is assumed for illustrative purposes to increase based on the assumed salary increase assumption on a year-over-year basis.
4. Plan fiduciary net position (assets) is reflected and assumed to increase at an estimated investment rate of return of 5.03%. It assumed there are no future contributions to the OPEB Trust, nor any OPEB benefits paid from the OPEB Trust.
5. The OPEB Liability as of the beginning of the year above is illustrated based on the current valuation assumptions, including current assumed discount rate and healthcare cost inflation trend rates.
6. Projections based on end of year discount rate of 4.09%.



SECTION VIII: ACTUARIALLY DETERMINED CONTRIBUTION

Summary of Financial Results as of July 1, 2023

1 Discount Rate (See Page 1, Section B, Line 2a of Report)	4.09%
2 Net OPEB Liability Amortization Factor (PV 30 yrs at 4.09%, BOY)	17.8042
3 Net OPEB Liability as of July 1, 2023 (See Page 9, Line 5 of Report)	\$ 1,092,736,329
4 Service Cost with Interest - July 1, 2023 to June 30, 2024 (See Page 1, Section B, Line 1 of Report)	\$ 34,271,406
5 30 Year Amortization of Net OPEB Liability $(3) / (2) * [1 + (1)]$	\$ 63,885,445
6 Actuarially Determined Contribution (4) + (5)	\$ 98,156,851
7 Projected Pay-As-You-Go (See Page 1, Section B, Line 2c of Report)	\$ 38,638,892
8 Total Annual Payroll (See Page 1, Section A, Line 7 of Report)	\$ 422,229,523



SECTION IX: FORECAST OF FIDUCIARY NET POSITION (OPEB TRUST)

[t]	[A]=[E(n-1)]	[B]=[Input]	[C]=[Input]	[D]=0.2%*(A)+([B]+[C])/2	[E]=5.03%*(A)+([B]+[C]+[D])/2	[F]=[A]-[B]+[C]+[D]+[E]
Time Period	OPEB Trust Balance at Beginning of Year	Contributions to OPEB Trust (1)	(PAYGO) Distributions from OPEB Trust	OPEB Trust Administrative Expense (2)	OPEB Trust Investment Earnings (3)	OPEB Trust Balance at End of Year
1.	\$ 15,633,776	\$ -	\$ (38,741,036)	\$ 7,473	\$ (187,770)	\$ -
2.	\$ -	\$ -	\$ (39,707,869)			
3.	\$ -	\$ -	\$ (40,341,131)			
4.	\$ -	\$ -	\$ (41,374,997)			
5.	\$ -	\$ -	\$ (42,516,864)			
6.	\$ -	\$ -	\$ (44,173,570)			
7.	\$ -	\$ -	\$ (45,452,138)			
8.	\$ -	\$ -	\$ (47,156,182)			
9.	\$ -	\$ -	\$ (49,076,608)			
10.	\$ -	\$ -	\$ (51,928,371)			
11.	\$ -	\$ -	\$ (53,420,215)			
12.	\$ -	\$ -	\$ (54,498,985)			
13.	\$ -	\$ -	\$ (55,668,771)			
14.	\$ -	\$ -	\$ (56,899,030)			
15.	\$ -	\$ -	\$ (58,487,335)			
16.	\$ -	\$ -	\$ (60,457,247)			
17.	\$ -	\$ -	\$ (62,465,035)			
18.	\$ -	\$ -	\$ (64,974,845)			
19.	\$ -	\$ -	\$ (66,682,536)			

Notes:

- (1) No future contributions to the OPEB Trust are assumed for this analysis.
- (2) Based on historical OPEB trust administrative expense of 0.20% of asset balance.
- (3) Long-term expected rate of return on OPEB trust investments assumed to 5.03% per year.

FOR EXHIBIT PURPOSES, ONLY THE FIRST 20 YEARS ARE ILLUSTRATED



SECTION X: DETERMINATION OF SINGLE DISCOUNT RATE

[t]	[A]=Sec. IX, Col [A]	[B]=Sec. IX, Col [C]	[C]=[A] or [B]	[D]=[B] - [C]	[E]=[C]/(1+5.03%)^(t-0.5)	[F]=[D]/(1+4.09%)^(t-0.5)	[F]=[D]/(1+4.09%)^(t-0.5)
Time Period	OPEB Trust Balance at Beginning of Year	Total PAYGO	Funded Portion of PAYGO	Unfunded Portion of PAYGO	Present Value of Funded Portion of PAYGO (1)	Present Value of Unfunded Portion of PAYGO (2)	Present Value of Total PAYGO (3)
1.	\$ 15,633,776	\$ 38,741,036	\$ 15,633,776	\$ 23,107,260	\$ 15,254,824	\$ 22,648,735	\$ 37,972,248
2.	\$ -	\$ 39,707,869	\$ -	\$ 39,707,869	\$ -	\$ 37,390,655	\$ 37,390,547
3.	\$ -	\$ 40,341,131	\$ -	\$ 40,341,131	\$ -	\$ 36,494,343	\$ 36,494,168
4.	\$ -	\$ 41,374,997	\$ -	\$ 41,374,997	\$ -	\$ 35,958,904	\$ 35,958,662
5.	\$ -	\$ 42,516,864	\$ -	\$ 42,516,864	\$ -	\$ 35,499,373	\$ 35,499,066
6.	\$ -	\$ 44,173,570	\$ -	\$ 44,173,570	\$ -	\$ 35,433,410	\$ 35,433,036
7.	\$ -	\$ 45,452,138	\$ -	\$ 45,452,138	\$ -	\$ 35,026,421	\$ 35,025,983
8.	\$ -	\$ 47,156,182	\$ -	\$ 47,156,182	\$ -	\$ 34,911,706	\$ 34,911,203
9.	\$ -	\$ 49,076,608	\$ -	\$ 49,076,608	\$ -	\$ 34,905,830	\$ 34,905,260
10.	\$ -	\$ 51,928,371	\$ -	\$ 51,928,371	\$ -	\$ 35,482,901	\$ 35,482,253
11.	\$ -	\$ 53,420,215	\$ -	\$ 53,420,215	\$ -	\$ 35,068,004	\$ 35,067,296
12.	\$ -	\$ 54,498,985	\$ -	\$ 54,498,985	\$ -	\$ 34,370,418	\$ 34,369,659
13.	\$ -	\$ 55,668,771	\$ -	\$ 55,668,771	\$ -	\$ 33,728,655	\$ 33,727,845
14.	\$ -	\$ 56,899,030	\$ -	\$ 56,899,030	\$ -	\$ 33,119,460	\$ 33,118,601
15.	\$ -	\$ 58,487,335	\$ -	\$ 58,487,335	\$ -	\$ 32,706,284	\$ 32,705,373
16.	\$ -	\$ 60,457,247	\$ -	\$ 60,457,247	\$ -	\$ 32,479,455	\$ 32,478,488
17.	\$ -	\$ 62,465,035	\$ -	\$ 62,465,035	\$ -	\$ 32,239,504	\$ 32,238,481
18.	\$ -	\$ 64,974,845	\$ -	\$ 64,974,845	\$ -	\$ 32,217,186	\$ 32,216,102
19.	\$ -	\$ 66,682,536	\$ -	\$ 66,682,536	\$ -	\$ 31,764,751	\$ 31,763,621

Notes:

- (1) PV of funded portion of projected benefits discounted at long-term expected rate of return on OPEB investments of 5.03%.
- (2) PV of unfunded portion of projected benefits discounted at the yield on 20-year tax-exempt AA general obligation municipal bond index of 4.09%.
- (3) PV of total projected benefits discounted at the equivalent single discount rate of 4.09%.

FOR EXHIBIT PURPOSES, ONLY THE FIRST 20 YEARS ARE ILLUSTRATED