City of Newton

Actuarial Valuation and Review of Other Postemployment Benefits (OPEB)

Measured at June 30, 2023

Segal

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April 5, 2024

Mr. Stephen Curley
Comptroller
City of Newton
1000 Commonwealth Avenue, Room 110
Newton, MA 02459

Dear Mr. Curley:

We are pleased to submit this report on our actuarial valuation of postemployment welfare benefits as of June 30, 2023. The purpose of this report is to calculate an Actuarially Determined Contribution for the City of Newton Other Postemployment Benefit (OPEB) Plan for the fiscal years ending June 30, 2024 and June 30, 2025. It summarizes the actuarial data used in the valuation and analyzes the experience and changes in assumptions since the prior valuation. The GASB Statements No. 74 and 75 disclosure information for the fiscal year ending June 30, 2024 will be provided in a separate report when the June 30, 2024 financial information is available.

This report is based on information received from the City of Newton and vendors employed by the City of Newton. Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. Segal, however, does review the data for reasonableness and consistency.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security at termination of the plan, or determining short-term cash flow requirements.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience or rates of return on assets differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements.

Segal makes no representation or warranty as to the future status of the Plan and does not guarantee any particular result. This document does not constitute legal, tax, accounting or investment advice or create or imply a fiduciary relationship. The City is encouraged to discuss any issues raised in this report with the Plan's legal, tax and other advisors before taking, or refraining from taking, any action.

The actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. The actuarial calculations were directed under our supervision. We are members of the American Academy of Actuaries and collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. The assumptions used in this actuarial valuation were selected by the City of Newton based upon our analysis and recommendations. In our opinion, the assumptions are reasonable and take into account the experience of the City of Newton and reasonable expectations.

We look forward to discussing this with you at your convenience. Once you've reviewed this report, please send a copy (preferably the electronic version) to Jim Lamenzo at PERAC. His email address is jlamenzo@per.state.ma.us.

Sincerely,

Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Chief Actuary

Daniel J. Rhodes, FSA, MAAA
Senior Vice President and Consulting Actuary

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report presents the results of our actuarial valuation of the City of Newton other postemployment welfare benefit plan as of June 30, 2023. The purpose of this report is to calculate a recommended Actuarially Determined Contribution for the OPEB plan for the fiscal years ending June 30, 2024 and June 30, 2025. Determinations for purposes other than meeting funding requirements may be significantly different from the results reported here. This valuation is based on:

- The benefit provisions of the OPEB plan, as administered by the City of Newton;
- The characteristics of covered active members, retired members and beneficiaries as of June 30, 2023, provided by the City of Newton;
- The assets of the Plan as of June 30, 2023, provided by the City of Newton;
- Economic assumptions regarding future salary increases and investment earnings;
- Health care assumptions regarding per capita costs, trend rates and participation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Highlights of the valuation

- The discount rate used to determine the liabilities that are the basis of the Actuarially Determined Contribution (ADC) is the expected return on assets. Based on the investment allocation of the OPEB Trust, we recommend maintaining the expected return on assets assumption of 6.90% for this valuation.
- The unfunded actuarial accrued liability (UAAL) as of June 30, 2023 is $406.6 million based on an actuarial accrued liability (AAL) of $437.5 million and an actuarial value of assets of $30.9 million. Going forward, net unfunded plan obligations will be expected to change due to normal plan operations, which consist of continuing accruals for active members, plus interest on the unfunded actuarial accrued liability, less employer contributions. Future valuations will analyze the difference between actual and expected unfunded actuarial accrued liabilities.
- As of June 30, 2023 the ratio of assets to the AAL (the funded ratio) is 7.07%, compared to 5.20% in the prior valuation. This funded percentage is not necessarily appropriate for assessing the sufficiency of OPEB assets to cover the estimated cost of settling the benefit obligations or the need for or the amount of future contributions.

Section 1: Actuarial Valuation Summary

- The participant data received for the June 30, 2023 actuarial valuation included 2,360 active employees with health coverage and 3,075[1] retirees and beneficiaries receiving retiree health benefits compared to 2,503 active employees and 3,016[1] retirees and beneficiaries in the prior valuation.
- The following assumptions were revised with this valuation:
  - The per capita health costs, contributions, and trends were updated to reflect current experience and future expectations.
  - The actuarial factors used to estimate individual retiree and spouse costs by age and by gender were updated.
  - The per capita costs were updated to reflect a change in carrier for medical benefits:
    - The change from the Tufts MCP plan to the Blue Cross Blue Shield Medex 2 w/ PDP plan resulted in a large decrease in the OPEB liability, as the prior plan was self-funded and received a Retiree Drug Subsidy (RDS) which was not accounted for in the OPEB liability.
  - The trend on Medicare plans was adjusted to estimate the impact of the Inflation Reduction Act of 2022 (IRA):
    - The Inflation Reduction Act of 2022 (IRA) includes material benefit cost-sharing changes for 2025, most notably implementing a $2,000 member out-of-pocket maximum, as well as various funding changes that are used to reduce premiums for Medicare prescription drug plans. Both changes are expected to significantly increase premiums. Our projections include an estimated impact of the IRA on the Plan in calendar year 2025 based on preliminary information. Final guidance, rules, and clarifications will be provided by the Centers for Medicare & Medicaid Services in the summer of 2024.
  - The mortality projection scale was updated for teachers to be consistent with the most recent Teachers' Retirement System Actuarial Valuation Report.
- The following plan changes were reflected with this valuation:
  - The Medicare Part B reimbursement benefit was changed; and
  - Copays for certain medical visits were changed and prescription drug copays were increased.

[1] Counts include 99 and 57 retirees with only life insurance as of June 30, 2023 and June 30, 2021, respectively.

Section 1: Actuarial Valuation Summary

- The UAAL was expected to increase by $26.8 million from $417.6 million as of June 30, 2021 to $444.3 million as of June 30, 2023. The actual unfunded liability of $406.6 million is $37.8 million less than expected. The difference between the actual decrease and expected increase was the net effect of the following:

June 30, 2021 unfunded actuarial liability	$417,560,561
June 30, 2023 expected unfunded actuarial liability	$444,335,982
Change due to:	
• Net experience gain	-$6,665,803
• Investment loss partially offset by higher contributions than expected	1,909,150
• Updating per capita costs and contributions (including updated actuarial factors)	46,944,796
• Estimated savings due to change in carrier to BCBS	-88,338,617
• Updating trends	7,011,146
• Estimated impact of the IRA	22,620,671
• Updating mortality assumptions	383,025
• Plan amendment (changes to Part B reimbursement)	-21,644,975
Net decrease	-$37,780,607
June 30, 2023 unfunded actuarial accrued liability	$406,555,375

- The ADC for fiscal year 2024 is $37,498,080. The ADC is calculated using a 24-year amortization of the UAAL, with payments increasing at 2.75% per year.
- A projection of the ADC appears on page 12. The projection reflects the City of Newton's policy to contribute $3,500,000 in the fiscal year ended June 30, 2024 increasing by $250,000 per year through fiscal 2032. The City of Newton Contributory Retirement System is projected to be fully funded in fiscal 2032 if all assumptions are met. The funding policy anticipates that beginning in fiscal 2033 (previously 2031), $50,000,000 will be contributed to the OPEB Trust until fully funded. The liabilities are projected to be fully funded in 2041 if all assumptions are met and there are no future changes in assumptions or the plan of benefits. The net impact of the reduction in the UAAL and the delay in increasing the contributions to $50,000,000 is a two-year delay in reaching full funding.
- Through fiscal 2040, the City of Newton will pay projected benefit payments in addition to the contribution to the OPEB Trust. In fiscal 2041, a payment will be made to the OPEB trust equal to the normal cost and remaining unfunded liability, adjusted for interest, and benefit payments will be paid from the OPEB Trust. The funding contribution to the OPEB Trust in fiscal 2042 will be the normal cost payment.

OPEB Trust information

As of June 30, 2023, the City of Newton has $30,923,390 in assets. The table below shows the increase in assets from June 30, 2021 to June 30, 2023.

Reconciliation of OPEB Balance from June 30, 2021 through June 30, 2023	Total
Balance as of June 30, 2021	$22,888,853
• Contributions	3,572,360
• Net investment income	-1,087,129
Balance as of June 30, 2022	$25,374,084
• Contributions	3,931,613
• Net investment income	1,617,693
Balance as of June 30, 2023	$30,923,390

Other considerations

Employer decisions regarding plan design, cost sharing between the Employer and its retirees, actuarial cost method, amortization techniques, and integration with Medicare are just some of the decisions that affect the magnitude of OPEB obligations. We are available to assist you with any investigation of such options you may wish to undertake.

Calculations are based on the benefits provided under the terms of the substantive plan in effect at the time of the valuation and on the pattern of sharing costs between the employer and plan members. The projection of benefits does not incorporate the potential effect of legal or contractual funding limitations on the pattern of cost sharing between the employer and plan members in the future.

Actuarial calculations reflect a long-term perspective, and the methods and assumptions use techniques designed to reduce short-term volatility in accrued liabilities and the actuarial value of assets, if any.

The calculation of an accounting obligation does not, in and of itself, imply that there is any legal liability to provide the benefits valued, nor is there any implication that the Employer is required to implement a funding policy to satisfy the projected expense.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to defining future uncertain obligations of a postretirement health plan. As such, it will never forecast the precise future stream of benefit payments. It is an estimated forecast – the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Input	Description
Plan of benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. For example, a plan may provide health benefits to post-65 retirees that coordinates with Medicare. If so, changes in the Medicare law or administration may change the plan's costs without any change in the terms of the plan itself. It is important for the City of Newton to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant data	An actuarial valuation for a plan is based on data provided to the actuary by the plan. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is not necessary to have perfect data for an actuarial valuation: the valuation is an estimated forecast, not a prediction. The uncertainties in other factors are such that even perfect data does not produce a "perfect" result. Notwithstanding the above, it is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the asset values as of the valuation date, provided by the City of Newton.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. To determine the future costs of benefits, Segal collects claims, premiums, and enrollment data in order to establish a baseline cost for the valuation measurement, and then develops short- and long-term health care cost trend rates to project increases in costs in future years. This forecast also requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year, as well as forecasts of the plan's benefits for each of those events. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets or, if there are no assets, a rate of return based on a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions the actuary selects within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model necessarily uses approximations and estimates that may lead to significant changes in our results but will have no impact on the actual cost of the plan. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared for use by the City of Newton. It includes information for compliance with accounting standards and for the plan's auditor. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- If the City of Newton is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- An actuarial valuation is a measurement at a specific date – it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- Sections of this report include actuarial results that are not rounded, but that does not imply precision.
- Critical events for a plan include, but are not limited to, decisions about changes in benefits and contributions. The basis for such decisions needs to consider many factors such as the risk of changes in plan enrollment, emerging claims experience, health care cost trend, and investment losses, not just the current valuation results.
- Segal does not provide investment, legal, accounting, or tax advice and is not acting as a fiduciary to the Plan. This valuation is based on Segal's understanding of applicable guidance in these areas and of the Plan's provisions, but they may be subject to alternative interpretations. The City of Newton should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the City of Newton upon delivery and review. The City of Newton should notify Segal immediately of any questions or concerns about the final content.

Section 2: Valuation Results

Summary of valuation results

	June 30, 2023 6.90% Discount Rate	June 30, 2021 6.90% Discount Rate
Actuarial Accrued Liability		
1. Current retirees, beneficiaries and dependents	$244,286,187	$255,329,500
2. Current active employees	193,192,578	185,119,914
3. Total: **(1) + (2)**	$437,478,765	$440,449,414
4. Actuarial value of assets	30,923,390	22,888,853
5. Unfunded actuarial accrued liability (UAAL): **(3) - (4)**	$406,555,375	$417,560,561
6. Funded ratio: **(4) / (3)**	7.07%	5.20%
Actuarially Determined Contribution for Fiscal Year Ending June 30:	**2024**	**2022**
7. Normal cost, adjusted for timing	$10,893,366	$11,724,389
8. Amortization payment of the UAAL, adjusted for timing	26,604,714	26,073,571
9. Total Actuarially Determined Contribution (ADC): **(7) + (8)**	$37,498,080	$37,797,960
10. Projected benefit payments	23,023,849	23,417,962
Actuarially Determined Contribution for Fiscal Year Ending June 30:	**2025**	**2023**
11. Normal cost, adjusted for timing	$11,209,723	$12,064,880
12. Amortization payment of the UAAL, adjusted for timing	28,098,251	27,542,166
13. Total Actuarially Determined Contribution (ADC): **(11) + (12)**	$39,307,974	$39,607,046
14. Projected benefit payments	23,546,654	24,865,997

Notes:
Assumes payment in the middle of the fiscal year.
Amortization payment for 2022 and 2023 are 26-year and 25-year payments, respectively, increasing at 2.75% per year.
Amortization payment for 2024 and 2025 are 24-year and 23-year payments, respectively, increasing at 2.75% per year.

Projection of actuarially determined contribution

Fiscal Year Ending June 30	(1) Normal Cost	(2) Amortization of UAAL	(3) Actuarially Determined Contribution: (1) + (2)	(4) Projected Benefits Paid by the City	(5) Projected Benefits paid by the Trust	(6) Contribution to OPEB Trust	(7) Total City Contributions: (4)+(5)+(6)	(8) Assets at End of Year	(9) AAL at End of Year	(10) UAAL at End of Year: (9) - (8)
2024	$10,893,366	$26,604,714	$37,498,080	$23,023,849	-	$3,500,000	$26,523,849	$36,675,840	$455,122,795	$418,446,955
2025	11,209,723	28,098,251	39,307,974	23,546,654	-	3,750,000	27,296,654	43,083,690	473,770,812	430,687,122
2026	11,535,267	29,728,160	41,263,427	26,247,152	-	4,000,000	30,247,152	50,192,163	491,250,019	441,057,856
2027	11,870,266	31,355,415	43,225,681	27,705,016	-	4,250,000	31,955,016	58,049,602	508,774,333	450,724,731
2028	12,214,993	33,072,750	45,287,743	29,365,771	-	4,500,000	33,865,771	66,707,685	526,147,151	459,439,466
2029	12,569,732	34,878,777	47,448,509	30,954,883	-	4,750,000	35,704,883	76,221,657	543,442,445	467,220,788
2030	12,934,773	36,794,140	49,728,913	32,715,152	-	5,000,000	37,715,152	86,650,574	560,488,554	473,837,980
2031	13,310,415	38,823,715	52,134,130	34,247,738	-	5,250,000	39,497,738	98,057,568	577,514,652	479,457,084
2032	13,696,966	41,008,847	54,705,813	36,107,719	-	5,500,000	41,607,719	110,510,125	594,192,135	483,682,010
2033	14,094,743	43,350,341	57,445,084	37,871,603	-	50,000,000	87,871,603	169,831,552	610,607,913	440,776,361
2034	14,504,072	41,575,205	56,079,277	39,275,813	-	50,000,000	89,275,813	233,246,157	627,127,748	393,881,591
2035	14,925,288	39,294,420	54,219,708	40,739,382	-	50,000,000	90,739,382	301,036,370	643,709,737	342,673,367
2036	15,358,737	36,367,720	51,726,457	41,899,576	-	50,000,000	91,899,576	373,504,108	660,684,484	287,180,376
2037	15,804,774	32,646,104	48,450,878	43,785,057	-	50,000,000	93,785,057	450,972,120	677,342,212	226,370,092
2038	16,263,764	27,789,737	44,053,501	45,755,384	-	50,000,000	95,755,384	533,785,424	693,586,714	159,801,290
2039	16,736,084	21,396,512	38,132,596	47,814,377	-	50,000,000	97,814,377	622,312,846	709,311,587	86,998,741
2040	17,222,121	12,862,092	30,084,213	49,966,024	-	50,000,000	99,966,024	716,948,660	724,399,361	7,450,701
2041	17,722,273	1,235,420	18,957,693	-	$52,214,495	25,425,736	25,425,736	738,720,562	738,720,562	-
2042	18,236,950	-	18,236,950	-	54,564,147	18,236,950	18,236,950	752,132,699	752,132,699	-

Notes:
Assumes payment in the middle of the fiscal year.
Assets are assumed to return 6.9% per year.
Amortization payments are based on a 24-year period as of July 1, 2023 with payments increasing 2.75% per year.
Normal cost is projected to increase at the wage inflation assumption of 2.75% per year and 0.15% for future mortality improvement and does not reflect the future impact of pension reform for new hires or higher cost sharing for new hires.

Section 3: Supporting Information

Exhibit 1 – Summary of Participant Data as of June 30, 2023 and June 30, 2021

	June 30, 2023	June 30, 2021
Active Employees Covered for Medical Benefits		
• Number of employees	2,360	2,503
• Average age	45.2	45.0
• Average service	12.4	11.6
Retirees, Beneficiaries and Dependents Covered		
• Number[1]	3,075	3,016
• Average age	74.9	75.1
Retired Employees with Life Insurance		
• Number	896	946
• Average age	77	76.8

[1] Includes 99 and 57 retirees with only life insurance as of June 30, 2023 and June 30, 2021, respectively.

Exhibit 2 – Statement of Actuarial Assumption, Methods and Models

Data

Detailed census data, claims experience, premium rates and summary plan descriptions for postemployment welfare benefits were provided by the City of Newton.

Actuarial Cost Method

Entry Age Normal – Level percentage of payroll

Per Capita Cost Development: Fully Insured Plans (Medicare)

Per capita costs were based on the fully insured premium rates effective January 1, 2023 and January 1, 2024. Premiums were combined by taking a weighted average based on the number of participants in each plan, and were then trended to the midpoint of the valuation year at assumed trend rates. Actuarial factors were applied to the weighted average cost to estimate individual retiree and spouse costs by age and by gender.

The Inflation Reduction Act of 2022 (IRA) includes material benefit cost-sharing changes for Medicare prescription drug plans in 2025, most notably implementing a $2,000 member out-of-pocket maximum, as well as various funding changes that are expected to significantly increase plan premiums. Our projections include an estimated impact of the IRA on the Plan in calendar year 2025 based on preliminary information. Final guidance, rules, and clarifications will be provided by the Centers for Medicare & Medicaid Services in the summer of 2024.

Per Capita Cost Development: Self-Funded Plans (Non-Medicare)

Per capita claims costs were based on the monthly paid claims experience by participant group and by covered (medical and prescription drug) for the period July 1, 2020 through June 30, 2023. Medical claims for July 2020 were adjusted to account for reduced utilization due to COVID-19. Claims were separated by plan year and by coverage and then adjusted as follows:

- enrollment was lagged two months for medical and one month for prescription drugs to account for time difference between incurred and payment of claims,
- total claims were divided by the number of adult members to yield a per capita claim cost,
- the per capita claim cost was trended to the midpoint of the valuation year at assumed trend rates, and
- the per capita claim was adjusted for the effect of any plan changes.

Actuarial factors were then applied to the weighted average cost to estimate individual retiree and spouse costs by age and by gender.

A projected savings factor of 4.2% was then applied to the costs to reflect the estimated savings due to changing medical provider to Blue Cross Blue Shield. This projected savings factor was calculated by Lockton as a part of their RFQ process.

Section 3: Supporting Information

Valuation Date

June 30, 2023

Roll-Forward Technique

To project the Actuarially Determined Contribution for fiscal year 2024 and later, liabilities were rolled forward from June 30, 2023 using standard actuarial techniques.

Expected Return on Assets

6.90%

Long-term rate of return on investments expected to be used to finance the benefits. The expected return was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce a 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.

Discount Rate

6.90%. The discount rate is equal to the expected return on assets.

Asset Valuation Method

Market Value

Salary Increases

Years of Service	Groups 1 and 2	Group 4	Teachers
0	7.00%	8.00%	7.50%
1	6.50%	7.50%	7.10%
2	6.00%	7.00%	7.00%
3	5.50%	6.50%	6.90%
4	5.25%	6.00%	6.80%
5	5.00%	5.50%	6.70%
6	4.75%	5.25%	6.60%
7	4.50%	5.00%	6.50%
8	4.25%	4.75%	6.30%
9	4.00%	4.50%	6.10%
10	3.75%	4.25%	5.90%
11	3.50%	4.00%	5.70%
12	3.50%	4.00%	5.20%
13	3.50%	4.00%	4.70%
14	3.50%	4.00%	4.35%
15-16	3.50%	4.00%	4.20%
17-19	3.50%	4.00%	4.10%
20 and later	3.50%	4.00%	4.00%

Note:
Total payroll is assumed to increase 2.75% per year.

Mortality Rates

Pre-Retirement (non-Teachers): RP-2014 Blue Collar Employee Mortality Table projected generationally using Scale MP-2021.

Healthy Retiree (non-Teachers): RP-2014 Blue Collar Healthy Annuitant Mortality Table projected generationally using Scale MP-2021.

Disabled Retiree (non-Teachers): RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year projected generationally using Scale MP-2021.

Pre-Retirement (Teachers): Pub 2010 Teacher Employee Mortality Table (headcount weighted) projected generationally with Scale MP-2021 (previously using Scale MP-2020)

Healthy Retiree (Teachers): Pub 2010 Teacher Retiree Mortality Table (headcount weighted) projected generationally with Scale MP-2021 (previously using Scale MP-2020)

Disabled Retiree (Teachers): Pub 2010 Teacher Retiree Mortality Table (headcount weighted) projected generationally with Scale MP-2021 (previously using Scale MP-2020)

The underlying tables with generational projection to the ages of participants as of the measurement date reasonably reflect the mortality experience of the plan as of the measurement date. The mortality tables were then adjusted to future years using generational projection to reflect future mortality improvement.

Annuitant Mortality Rates – Non-Teacher

Age	Healthy Male	Healthy Female	Disabled Male	Disabled Female
60	0.85%	0.57%	0.91%	0.62%
70	1.97%	1.40%	2.16%	1.54%
80	5.19%	3.82%	5.74%	4.24%
90	14.64%	11.19%	16.18%	12.43%

Note:
Rates shown are before generational projection.

Annuitant Mortality Rates – Teacher

Age	Healthy Male	Healthy Female	Disabled Male	Disabled Female
60	0.42%	0.32%	0.42%	0.32%
70	1.16%	0.80%	1.16%	0.80%
80	4.09%	2.88%	4.09%	2.88%
90	13.75%	10.40%	13.75%	10.40%

Note:
Rates shown are before generational projection.

Termination Rates Before Retirement – Groups 1 and 2 (excluding Teachers)

Age	Mortality Male	Mortality Female	Disability
20	0.05%	0.02%	0.01%
25	0.06%	0.02%	0.02%
30	0.06%	0.02%	0.03%
35	0.07%	0.03%	0.06%
40	0.08%	0.04%	0.10%
45	0.13%	0.07%	0.15%
50	0.22%	0.12%	0.19%
55	0.36%	0.19%	0.24%
60	0.61%	0.27%	0.28%

Notes:
70% of the disability rates shown represent accidental disability.
70% of the death rates shown represent accidental death.
Rates shown are before generational projection.

Termination Rates Before Retirement – Group 4

Age	Mortality Male	Mortality Female	Disability
20	0.05%	0.02%	0.10%
25	0.06%	0.02%	0.20%
30	0.06%	0.02%	0.30%
35	0.07%	0.03%	0.30%
40	0.08%	0.04%	0.30%
45	0.13%	0.07%	1.00%
50	0.22%	0.12%	1.25%
55	0.36%	0.19%	1.20%
60	0.61%	0.27%	0.85%

Notes:
90% of the disability rates shown represent accidental disability.
90% of the death rates shown represent accidental death.
Rates shown are before generational projection.

Termination Rates Before Retirement – Teachers

Age	Mortality Male	Mortality Female	Disability
20	0.04%	0.01%	0.00%
25	0.02%	0.01%	0.01%
30	0.03%	0.02%	0.01%
35	0.04%	0.02%	0.01%
40	0.05%	0.03%	0.01%
45	0.08%	0.05%	0.03%
50	0.13%	0.08%	0.05%
55	0.19%	0.12%	0.07%
60	0.29%	0.18%	0.07%

Notes:
75% of the death rates shown represent accidental death.
35% of the disability rates shown represent accidental disability.
Rates shown are before generational projection.

Withdrawal Rates – Non-Teachers

Years of Service	Groups 1 and 2	Group 4
0	15.0%	1.5%
1	12.0%	1.5%
2	10.0%	1.5%
3	9.0%	1.5%
4	8.0%	1.5%
5	7.6%	1.5%
6	7.5%	1.5%
7	6.7%	1.5%
8	6.3%	1.5%
9	5.9%	1.5%
10	5.4%	1.5%
11	5.0%	0.0%
12	4.6%	0.0%
13	4.1%	0.0%
14	3.7%	0.0%
15	3.3%	0.0%
16 – 20	2.0%	0.0%
21 – 29	1.0%	0.0%
30+	0.0%	0.0%

Withdrawal Rates – Teachers

Age	Male 0 – 4 Years of Service	Female 0 – 4 Years of Service	Male 5 – 9 Years of Service	Female 5 – 9 Years of Service	Male 10+ Years of Service	Female 10+ Years of Service
20	13.0%	10.0%	5.5%	7.0%	1.5%	5.0%
30	15.0%	15.0%	5.4%	8.8%	1.5%	4.5%
40	13.3%	10.5%	5.2%	5.0%	1.7%	2.2%
50	16.2%	9.8%	7.0%	5.0%	2.3%	2.0%

Retirement Rates – Groups 1 and 2 (excluding Teachers)[1]

Age	Male	Female
50 - 51	1.0%	1.5%
52	1.0%	2.0%
53	1.0%	2.5%
54	2.0%	2.5%
55	2.0%	5.5%
56 - 57	2.5%	6.5%
58	5.0%	6.5%
59	6.5%	6.5%
60	12.0%[2]	5.0%[3]
61	20.0%	13.0%
62	30.0%	15.0%
63	25.0%	12.5%
64	22.0%	18.0%
65	40.0%	15.0%
66 - 67	25.0%	20.0%
68	30.0%	25.0%
69	30.0%	20.0%
70	100.0%	100.0%

[1] Rates are 0.0% for employees not eligible to retire.
[2] Rate is 12.0% for employees hired prior to April 2, 2012 and 20.0% for employees hired on or after April 2, 2012.
[3] Rate is 5.0% for employees hired prior to April 2, 2012 and 9.0% for employees hired on or after April 2, 2012.

Retirement Rates – Group 4[1]

Age	Male and Female
45 - 49	1.0%
50 - 51	2.0%
52	2.0%
53	5.0%
54	7.5%
55	15.0%[2]
56 - 57	10.0%
58	10.0%
59	15.0%
60	20.0%
61	20.0%
62	25.0%
63	25.0%
64	30.0%
65	100.0%

[1] Rates are 0.0% for employees not eligible to retire.
[2] Rate is 15.0% for employees hired prior to April 2, 2012 and 30.0% for employees hired on or after April 2, 2012

Retirement Rates – Teachers

Age	Male Less than 20 Years of Service	Female Less than 20 Years of Service	Male 20 – 29 Years of Service	Female 20 – 29 Years of Service	Male 30 or more Years of Service	Female 30 or more Years of Service
50 – 52	- -	- -	1.0%	1.0%	2.0%	1.5%
53	- -	- -	1.5%	1.0%	2.0%	1.5%
54	- -	- -	2.5%	1.0%	2.0%	2.0%
55	5.0%	3.0%	3.0%	3.0%	6.0%	5.0%
56	5.0%	3.0%	6.0%	5.0%	20.0%	15.0%
57	5.0%	4.0%	10.0%	8.0%	40.0%	35.0%
58	5.0%	8.0%	15.0%	10.0%	50.0%	35.0%
59	10.0%	8.0%	20.0%	15.0%	50.0%	35.0%
60	10.0%	10.0%	25.0%	20.0%	40.0%	35.0%
61	20.0%	12.0%	30.0%	25.0%	40.0%	35.0%
62	20.0%	12.0%	35.0%	30.0%	35.0%	35.0%
63	25.0%	15.0%	40.0%	30.0%	35.0%	35.0%
64	25.0%	20.0%	40.0%	30.0%	35.0%	35.0%
65	25.0%	25.0%	40.0%	40.0%	35.0%	35.0%
66	30.0%	25.0%	30.0%	30.0%	40.0%	35.0%
67	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
68	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
69	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
70	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Dependents

Dates of birth for spouses of current retirees electing family coverage were not provided. For current and future retirees, husbands were assumed to be three years older than their wives and 65% were assumed to have an eligible spouse who also opts for health coverage at that time.

Per Capita Health Costs

Fiscal year 2024 medical and prescription drug claims costs are shown in the table below for retirees and for spouses at selected ages. These costs are net of deductibles and other benefit plan cost sharing provisions.

Age	Non-Medicare Male	Non-Medicare Female	Medicare Male	Medicare Female
45	$13,601	$14,928	N/A	N/A
50	15,347	16,205	N/A	N/A
55	17,318	17,591	N/A	N/A
60	19,939	19,070	N/A	N/A
65	25,443	21,132	$4,179	$3,471
70	28,576	23,641	4,694	3,883
75	31,568	24,854	5,185	4,082
80	33,054	26,529	5,429	4,357

The actuarial factors used to estimate individual retiree and spouse costs by age and by gender were updated.

Weighted Average Annual Retiree Contribution Amount

Plan	Hired before July 1, 2011	Hired on or after July 1, 2011
Non-Medicare Plans	$3,162	$4,128
Medicare Plans	$870	$1,136

Notes:

Retirees are assumed to be hired before July 1, 2011.

Contribution rates for employees hired on or after July 1, 2011 are weighted based on current contribution rates for actives.

Health Care Cost Trend Rates

Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are "net" and are applied to the net per capita costs shown above. The trend shown for a particular plan year is the rate that is applied to that year's cost to yield the next year's projected cost.

Year Ending June 30	Non-Medicare	Medicare	Administration
2024	7.50%	-2.41%	3.00%
2025	7.25%	19.00%	3.00%
2026	7.00%	5.50%	3.00%
2027	6.75%	5.25%	3.00%
2028	6.50%	5.00%	3.00%
2029	6.25%	4.75%	3.00%
2030	6.00%	4.50%	3.00%
2031	5.75%	4.50%	3.00%
2032	5.50%	4.50%	3.00%
2033	5.25%	4.50%	3.00%
2034	5.00%	4.50%	3.00%
2035	4.75%	4.50%	3.00%
2036 and later	4.50%	4.50%	3.00%

The first year trend for Medicare plans was calculated using known change in premiums. The second year Medicare trend reflects the estimated impact of the Inflation Reduction Act, assuming a $40 increase in Medicare plan premiums for CY 2025. The other trend rate assumptions were developed using Segal's internal guidelines, which are established each year using data sources such as the 2024 Segal Health Trend Survey, internal client results, trends from other published surveys prepared by the S&P Dow Jones Indices, consulting firms and brokers, and CPI statistics published by the Bureau of Labor Statistics.

Retiree Contribution Increase Rate

Retiree contributions are expected to increase with medical trend.

Administrative Expenses

Administrative expenses for self-insured plans were based on current vendor contractual rates and fees. An administrative expense load of $534 per participant for non-Medicare plans and $231 per participant for Medicare plans, increasing at 3.0% per year, was added for projected incurred self-funded claim costs in developing the benefit obligations.

Medicare Part B Reimbursement

The Medicare Part B reimbursement has been frozen at a level of $77.12 per month and is not expected to increase with trend. Eligible retirees will receive 50% of the frozen reimbursement in fiscal 2024 and 25% of the frozen reimbursement in fiscal 2025. In fiscal 2026 and later years, 25% of the frozen reimbursement will continue for eligible retirees who are at or below 65% of the Newton Area Median Incomes. As household income was not provided for each retiree, we assume that retirees who are currently receiving Medicare Part B reimbursement will continue to receive this benefit.

Participation and Coverage Election

100% of active employees with coverage are assumed to elect retiree coverage.

100% of retirees over age 65 are assumed to remain with their current medical plan for life.

For future retirees hired before 1986 and current retirees under age 65, 90% are assumed to be eligible for Medicare and are assumed to enroll in a Medicare plan upon reaching age 65 and 10% are assumed to be ineligible for Medicare and to remain enrolled in a non-Medicare plan.

For future retirees hired after 1986, 100% are assumed to be eligible for Medicare and upon reaching age 65 are assumed to enroll in a Medicare Plan.

100% of future retirees with medical coverage are assumed to have life insurance coverage. Current retirees with life insurance coverage are identified in the data received.

Plan Design

Development of plan liabilities was based on the substantive plan of benefits in effect as described in Exhibit III.

Missing Participant Data

A missing census item for a given participant was assumed to equal the average value of that item over all other participants of the same status for whom the item is known.

Demographic and Salary Increase Assumptions

Many of the demographic assumptions used in this valuation for non-teachers (including mortality, disability, turnover, and retirement) and the salary increase assumptions are the same as used in the City of Newton Contributory Retirement System Actuarial Valuation and Review as of January 1, 2023, completed by Segal. The assumptions used in this valuation for teachers are the same as used in the Massachusetts Teachers' Retirement System Actuarial Valuation Report as of January 1, 2023, dated November 17, 2023 completed by PERAC. A review of these demographic assumptions is beyond the scope of this assignment, however, we have no reason to doubt the reasonableness of these assumptions.

The remaining demographic assumptions, such as percent married, relative ages of spouses, and enrollment elections, were based on the experience of the Plan and the experience of similar plans.

Health Care Reform Assumption

This valuation does not include the potential impact of any future changes due to prior pending legislation, other than the estimated effects of the Inflation Reduction Act described above.

Actuarial Models

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems Unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the model and reviews the test lives and results, under the supervision of the responsible actuary.

The results are also based on models for cost projections developed by Segal actuaries and programmers. The client team customized and validates the models, and reviews the results under the supervision of the responsible actuaries.

Our claims costs assumptions are based on proprietary modeling software as well as models that were developed by others. These models generate per capita claims cost calculations that are used in our valuation software. Our Health Technical Services Unit, comprised of actuaries and programmers, is responsible for the initial development and maintenance of our health models. They are also responsible for testing models that we purchase from other vendors for reasonableness. The client team inputs the paid claims, enrollments, plan provisions and assumptions into these models and reviews the results for reasonableness, under the supervision of the responsible actuary.

Justification for Assumption Changes Since Prior Valuation

Based on past experience and future expectations, the following actuarial assumptions were changed:

- The per capita health costs, contributions, and trends were updated and reflect the change in provider to Blue Cross Blue Shield.
- The Medicare trend in 2025 was adjusted to estimate the impact of the Inflation Reduction Act on Medicare Prescription Drug plans.
- The actuarial factors used to estimate individual retiree and spouse costs by age and by gender were updated.
- The mortality projection scale was updated for teachers to be consistent with the most recent Teachers' Retirement System Actuarial Valuation Report.

Exhibit 3 – Summary of Plan

This exhibit summarizes the major benefit provisions as included in the valuation. To the best of our knowledge, the summary represents the substantive plans as of the measurement date. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

Eligibility

Retired and receiving a pension from the City of Newton Contributory Retirement System or the Massachusetts Teachers' Retirement System.

- Members hired before April 2, 2012
  - Groups 1 and Group 2 (including Teachers):
    - Retirees with at least 10 years of creditable service are eligible at age 55;
    - Retirees with at least 20 years of creditable service are eligible at any age.
  - Group 4
    - Retirees are eligible at age 55;
    - Retirees with at least 20 years of creditable service are eligible at any age.
- Members hired on or after April 2, 2012
  - Group 1 (including Teachers):
    - Retirees with at least 10 years of creditable service are eligible at age 60.
  - Group 2
    - Retirees with at least 10 years of creditable service are eligible at age 55.
  - Group 4
    - Retirees are eligible at age 55;
    - Retirees with at least 10 years of creditable service are eligible at age 50.

Disability

Accidental (job-related) Disability has no age or service requirement.

Ordinary (non-job related) Disability has no age requirement but requires 10 years of creditable service.

Pre-Retirement Death

Surviving spouses of members who die in active service on Accidental (job-related) Death are eligible at any age. Surviving spouses of members who die in active service on Ordinary (non-job related) Death are eligible after two years of service.

Post-Retirement Death

Surviving spouse is eligible.

Benefit Types

Medical and prescription drug benefits are provided to all eligible retirees through plans offered by Blue Cross Blue Shield of Massachusetts. The City of Newton pays 50% of the retiree life insurance premium. (Dental coverage is offered but is 100% retiree paid and therefore has no impact on this valuation.)

Medicare Part B reimbursement is determined as follows:

- No employee who retires on or after July 1, 2023, will receive a Medicare Part B reimbursement.
- No retiree who becomes eligible for Medicare on or after July 1, 2023, will receive a retiree reimbursement.
- All retirees eligible and enrolled in Medicare as of June 30, 2023, will be eligible to receive the following:
  - Up to $925.44 (at the rate of $77.12 per eligible month) in June of 2023 for the eligibility period of July 1, 2022 to June 30, 2023.
  - Up to $462.72 (at the rate of $38.56 per eligible month) in June of 2024 for the eligibility period of July 1, 2023 to June 30, 2024.
  - Up to $230.00 (at the rate of $19.17 per eligible month) in June of 2025 for the eligibility period of July 1, 2024 to June 30, 2025.
  - Up to $230.00 (at the rate of $19.17 per eligible month) in June of each subsequent fiscal year commencing as of the July 1, 2025, if at or below 65% of the Newton Area Median Income in the preceding calendar year.

Duration of Coverage

Lifetime.

Dependent Benefits

Medical and Prescription Drugs.

Dependent Coverage

Benefits are payable to a spouse for their lifetime, regardless of when the retirees dies.

MGL Chapter 32B, Section 18A

Adopted.

Retiree Life

$5,000

Retiree Contributions

The premium rates and retiree contributions as of July 1, 2023 are summarized below:

Non-Medicare Plans	Monthly Premium as of July 1, 2023	Retiree Cost 20%	Retiree Cost 25%	Retiree Cost 30%	Retiree Cost 35%
Blue Care Elect PPO					
• Individual	$1,578.10	$315.62	$394.53	$473.43	$552.34
• Family	$3,790.10	$758.02	$947.53	$1,137.03	$1,326.53
Network Blue NE HMO					
• Individual	$947.55	$189.51	$236.89	$284.27	N/A
• Family	$2,651.25	$530.25	$662.81	$795.38	N/A
Blue Care Elect PPO – Legacy					
• Individual	$1,667.20	$333.44	N/A	N/A	N/A
• Family	$4,083.00	$816.60	N/A	N/A	N/A
Network Blue NE HMO – Legacy					
• Individual	$1,100.90	$220.18	N/A	N/A	N/A
• Family	$3,062.85	$612.57	N/A	N/A	N/A

Notes:

Retirees who retired and enrolled prior to April 1, 2012, are eligible for the Legacy plans at 20% contributions.

School retirees who retired after April 1, 2012, are enrolled in Network Blue NE HMO and were hired before July 1, 2011, are eligible for 20% contributions.

School retirees who retired after April 1, 2012, are enrolled in Network Blue NE HMO and were hired on or after July 1, 2011, as well as City retirees from the following unions are eligible for 25% contributions: AFSCME 2443, AFSCME 2913, Engineers, Local 863, Massachusetts Nurses Association, Newton Police Association, Newton Police Superior Officers, Teamsters 25.

School retirees who are enrolled in Blue Care Elect PPO and retired and enrolled between April 1, 2012, and June 30, 2020, as well as City retirees from the following unions are eligible for 30% contributions: Non-Union & AFSCME 3092/3092B.

School retirees who enrolled in the Blue Care Elect PPO after June 30, 2020 are eligible for 35% contributions.

Medicare Plans	Monthly Premium as of January 1, 2023	Retiree Cost 20%	Retiree Cost 25%	Retiree Cost 30%
BCBS Medex 2 w/ PDP	$368.52	$73.70	$92.13	$110.56
Tufts Medicare Preferred	$393.72	$78.74	$98.43	$118.12
Medicare PPO Blue Freedom Rx	$406.45	$81.29	$101.61	$121.94

Note:

School retirees hired after July 1, 2011 are eligible for 25% contributions for Medicare plans.

City union and non-union contribution percentages are the same as for non-Medicare.

Plan Changes Since the Prior Valuation

Retirees eligible for Medicare Part B reimbursement will receive 50% of the frozen reimbursement in fiscal 2024 and 25% of the frozen reimbursement in fiscal 2025. In fiscal 2026 and later years, 25% of the frozen reimbursement will continue for eligible retirees.

For the Teamsters Local #25, AFSCME 1703, AFSCME 2443, AFSCME 2913, the Newton Police Association, and the Newton Superior Officers Association:

- Specialist visit from $35 to $40.
- PCP visit from $20 to $25.
- Retail urgent care from $20 to $5,
- Urgent care center from $20 to $10.
- Prescription Drug Retail from $15/$30/$50 to $20/$30/$50.
- Prescription Drug Mail Order from $30/$60/$100 to $40/$60/$100.

These plan changes have been determined to be immaterial and are reflected in the updated per capita costs.

Exhibit 4 – Definition of Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions

The estimates on which the cost of the Plan is calculated including:

1. Investment return — the rate of investment yield that the Plan will earn over the long-term future;
2. Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
3. Retirement rates — the rate or probability of retirement at a given age;
4. Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Actuarial Accrued Liability (AAL)

Present value of all future benefit payments for current retirees and active employees that are attributed to past periods of service, taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions.

Unfunded Actuarial Accrued Liability (UAAL)

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There are many approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Normal Cost

The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarially Determined Contribution (ADC)

A target or recommended contribution to an OPEB plan for the reporting period based on the most recent measurement available.

Valuation Date

The date at which the actuarial valuation is performed

Covered Employee Payroll

The payroll of the employees that are provided OPEB benefits

Entry Age Actuarial Cost Method

An actuarial cost method where the present value of the projected benefits for an individual is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age

Health Care Cost Trend Rates

The rate of change in per capita health costs over time

Discount Rate

The interest rate used to determine the actuarial present value of projected benefit payments.

Expected Return on Assets

The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

Real Rate of Return

The rate of return on an investment after removing inflation.