Town of Boxford Other Postemployment Benefits Plan

GASB 74 & GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2021

As of the Measurement Date: June 30, 2022

For the Reporting Date: June 30, 2022

Delivered October 19, 2022





West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

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West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

October 19, 2022

Personal and Confidential

Ms. Kathleen Benevento Town Accountant / Finance Director Town of Boxford 7A Spofford Road Boxford, MA 01921

Dear Ms. Benevento:

We have performed an actuarial valuation of the Town of Boxford Other Postemployment Benefits Plan for the Reporting Date & Fiscal Year Ending June 30, 2022 with a Measurement Date of June 30, 2022 and a Valuation Date of July 1, 2021. The figures presented in this report reflect the adoption, by the Town of Boxford, of Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75").

The financial results of the actuarial valuation are summarized in the report. The Executive Summaries highlight the results of the valuation. Additional information summarizing census data, actuarial assumptions, claim rates and the methodology for developing them, as well as a glossary of selected terms used in this study, is also included in the report.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions used are reasonable, reflecting the experience of the plan and reasonable expectations and, in combination, represent our best estimate of the anticipated experience under the plan.

We will be pleased to answer any questions that you may have regarding this actuarial valuation report.

Very truly yours,

ht

Parker E. Elmore, ASA, EA, FCA, MAAA President, CEO & Actuary

Odyssey ADVISORS

East Coast 11 Hayward Ave, Building 4 Colchester, CT 06415 (860) 537-9080 West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

October 19, 2022

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Boxford other postemployment benefit programs with a Valuation Date of July 1, 2021 with a Measurement Date of June 30, 2022 for the Reporting Date & Fiscal Year Ending June 30, 2022 in accordance with Government Account Standards Board Statement No. 74 & 75 and Actuarial Standards of Practice as issued by the American Academy of Actuaries. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Numbers 74 & 75 for the determination of the liability for postemployment benefits other than pensions.

The actuarial data is based on the plan of benefits verified by the Town and on participant claims or premium data provided by the Town and/or vendors employed by the Town.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may yield results significantly different than those reported here. As such, additional determinations may be needed for other purposes including determining the benefit security at termination and/or adequacy of the funding of an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion represents the information necessary to comply with GASB Statements Number 74 and 75 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries and other professional actuarial organizations and meet their "General Qualification Standards for Statements of Actuarial Opinion" to render the actuarial opinion contained herein. Further, in our opinion, the assumptions as approved by the Town are reasonably related to the experience and expectations of the postemployment benefits programs.

Parker E. Elmore, ASA, EA, FCA, MAAA President, CEO & Actuary

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Kurtis J. Thompson, ASA, MAAA Consulting Actuary



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EXECUTIVE SUMMARY

How did plan liabilities change from FY 21 to FY 22?

Plan Experience

For the year ending on the Measurement Date of June 30, 2022, the Plan saw an experience gain of \$649,878 or 4.26% of the beginning Total OPEB Liability ("TOL"). This was mainly due to average premiums for Medicare Supplement plans increasing by 4% rather than the expected 9% increase over the two-year period.

Assumption Changes

One or more key assumptions have changed since the prior valuation. The total impact of these assumption changes increased disclosed liabilities by approximately \$3.5 million, as detailed below.

- ✓ Due to the GASB 75 standards the discount rate has been changed from 6.75% to 6.40% increasing the disclosed liability by approximately \$740 thousand.
- ✓ Due to updated guidance related to the implementation of ASOP 6, we have updated our methodology for calculating expected claims increasing the disclosed liability by approximately \$1.5 million.
- ✓ Based on recent actuarial research we have adopted the Getzen model for future projected healthcare costs increasing the disclosed liability by approximately \$1.3 million.

It is important to remember that actuarial assumptions or changes in such do not impact the actual cost of the Plan. Rather, they impact the timing of the recognition of such costs.

Investment Experience

✓ During the period investments earned approximately \$480 thousand less than expected.

Changes in Benefit Terms

✓ To the best of our knowledge there have been no material changes in benefit terms that would impact the figures shown in this report.





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EXECUTIVE SUMMARY

Recognition Period

- ✓ Changes in assumptions & plan experience are amortized into the net OPEB expense over 5.00 years.
- ✓ Differences between projected & actual earnings on OPEB plan investments are amortized into the net OPEB expense over 5.00 years
- ✓ Changes in benefit terms are to be recognized in full immediately

Events Subsequent to the Measurement Date

To the best of our knowledge there were no material events subsequent to the Measurement Date that would impact the figures shown in this report.

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare supplement) plans represent 73.56% of the total plan liabilities
- ✓ Age at which plan participants retire
- ✓ Percentage of plan participants who elect coverage for themselves and/or a spouse
- ✓ Medical care cost inflation rate We currently assume medical costs increase according to the Getzen Model of Long–Run Medical Cost Trends for Active and Medicare supplement plans, which includes an assumed 9.00% increase in fiscal year 2022 and an ultimate trend rate of 3.63% in fiscal year 2060.
- ✓ Discount Rate (6.40%) Higher discount rates yield lower liabilities and vice versa
- ✓ Cost Sharing Under Massachusetts law you may charge retirees up to 50% of premiums for health insurance

Discount Rate Determinants

- ✓ Employer Current and Future Benefit Payments
- ✓ Municipal Bond Rate The S&P 20-year high grade municipal bond index was 4.09% as of June 30, 2022.
- ✓ Current Asset Level The Town had \$4,417,840 of OPEB assets as of June 30, 2022.
- ✓ Future Funding Policy The Town is expected to contribute \$300,000 annually beyond pay-as-you-go costs.
- ✓ Investment Policy The Town is expected to earn 6.41% per year on assets based on its investment policy.



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EXECUTIVE SUMMARY

Low Default Risk Obligation Measure (LDROM)

For purposes of this LDROM, we have used a discount rate of 4.09% which represents the 20-year municipal bond index while keeping all other assumptions unchanged from the GASB 74/75 disclosures. Based on this, the LDROM Total OPEB Liability is \$25 million vs. the \$19 million under the GASB 74/75 measure - the reflection of the Town's funding and OPEB Trust Investment policy reduced disclosed liabilities by approximately \$6 million. Please note that the ultimate cost of the plan is the actual benefits paid plus expenses and any changes in assumptions, including discount rate, do not impact the actual cost of the plan.

Medicare Buy-In

The Town currently has 3 retirees or covered spouses who are over the age of 65 and are enrolled in Active medical plans rather than Medicare Supplement (Senior) plans. Under Actuarial Standards of Practice for OPEB, we are required to reflect the projected higher healthcare costs that occur as retirees age.

Recently, some of our clients have seen substantial cost savings by "buying into" Medicare for retirees who would otherwise be ineligible. To buy into Medicare the Town would need to pay the Medicare Part A premium and the Medicare Part A and B penalties. While the cost to buy into Medicare is significant, it is likely still far less than the cost of the claims that the associated retirees are expected to incur. You may wish to review their Medicare eligibility to see if they are already eligible for Medicare or if a "buy-in" is appropriate as this could yield a reduction in your OPEB annual costs and disclosed liabilities. If you are in this situation, we encourage you to talk to your healthcare consultant to see if this might be viable.





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EXECUTIVE SUMMARY

Key Plan Metrics

While an actuarial valuation under GASB 74/75 can be very complex with many variables, we find it helpful to look at several key metrics (shown below) to better allow you to manage your plan.

Representative Plan Statistics								
Valuation Date	July 1, 2021	July 1, 2019						
Measurement Date & Period Ending	June 30, 2022	June 30, 2021						
Reporting Date/Fiscal Year End	June 30, 2022	June 30, 2021						
Total OPEB Liability	18,704,813	15,267,628						
Per Eligible Active Plan Participant	55,567	40,731						
Per Retiree/Spouse Plan Participant	57,266	54,077						
Total Annual Service Cost (Annual Benefit Accrual)	332,587	299,406						
Per Eligible Active Plan Participant	1,837	1,654						
Expected Employer Share of Retiree Costs	821,153	776,946						
Per Retiree/Spouse Plan Participant	5,438	5,322						
Net OPEB Liability as a % of Covered Payroll	103.81%	90.47%						





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EXECUTIVE SUMMARY

Liabilities & Benefit Payments in Today's Dollars

With the growth of medical care costs over time, the nominal accrued liabilities ("TOL") and benefit payments can appear daunting. However, it is important to remember that a dollar paid in the future is worth less than a dollar paid today.

	Number of Retirees,				Present Value at 3.00% of
	Spouses, &		Present Value at 3.00%	Employer Share of	Employer Share of
For the Period Ending on	Surviving		of Total OPEB	Premiums/Claims	Premiums / Claims
the Measurement Date of:	Spouses	Total OPEB Liability	Liability	Including "Implicit Cost"	Including "Implicit Cost"
June 30, 2022	151	18,704,813	18,704,813	821,153	821,153
June 30, 2027	183	22,652,014	19,539,826	1,060,867	915,113
June 30, 2032	193	26,068,622	19,397,503	1,531,549	1,139,616
June 30, 2037	187	29,763,885	19,104,305	1,660,351	1,065,716
June 30, 2042	173	34,395,557	19,043,986	1,885,809	1,044,127
June 30, 2047	160	39,286,305	18,763,358	2,287,457	1,092,502
June 30, 2052	147	45,580,423	18,778,531	2,356,449	970,826





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EXECUTIVE SUMMARY

Continuing OPEB Disclosures

In addition to pension benefits, municipal entities may provide retired employees with healthcare and life insurance benefits. The portion of the cost of such benefit paid by these entities is generally provided on a pay-as-you-go basis.

The pay-as-you-go costs to the Town for such benefits for the most recent years is as follows:

<u>Fiscal Year Ending</u>		<u>Cost</u>
June 30, 2023	(Projected)	736,134
June 30, 2023	(110jected)	821,153
June 30, 2021		776,946
June 30, 2020		727,697
June 30, 2019		650,522
June 30, 2018		639,372

The Town performs actuarial valuations of its non-pension post-employment benefits liability in accordance with GASB reporting requirements. As of the June 30, 2022 Measurement Date the Net OPEB Liability ("NOL") was determined to be \$14,286,973 assuming a discount rate of 6.40%. The Town has established an OPEB Trust and plans to fund this liability. The Town is expected to contribute \$300,000 annually beyond pay-as-you-go costs. The balance of this fund as of June 30, 2022 was \$4,417,840. See the Town's audit reports for additional information.





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PRINCIPAL RESULTS OF THE VALUATION

Town of Boxford Assuming Funding - 6.40% discount rate Comparison of Plan Liabilities to Prior Valuation

Valuation Date	July 1, 2021	July 1, 2019
For the Measurement Period ending on the Measurement Date of:	June 30, 2022	June 30, 2021
For the Reporting Period & Fiscal Year ending on:	June 30, 2022	June 30, 2021
I. Total OPEB Liability		
A. Actives	10,057,613	7,372,329
B. Retirees/Disabled	8,647,200	<u>7,895,299</u>
C. Total	18,704,813	15,267,628
II. Fiduciary Net Position [Plan Assets]	4,417,840	4,292,646
III. Net OPEB Liability (Asset) [I II.]	14,286,973	10,974,982
IV. Funded Ratio [II. / I.]	23.62%	28.12%
V. Number of Eligible Participants		
A. Actives	181	181
B. Retirees/Disabled & Dependents	<u>151</u>	<u>146</u>
C. Total	332	327
VI. Service Cost	332,587	299,406
VII. Financial Statement Expense/(Income)	2,145,708	465,912
VIII. Employer OPEB Trust (Contribution)/Withdrawal	(300,000)	(300,000)
IX. Deferred Inflow of Resources	(707,469)	(789,804)
X. Deferred Outflow of Resources	3,483,171	1,278,070
XI. Money Weighted Rate of Return	(3.85%)	29.70%
XII. 20-year Municipal Bond Rate (SAPIHG)	4.09%	2.18%
XIII. Expected Long Term Rate of Return (Net of Expense)	6.41%	6.77%
XIV. Crossover Year	2094	N/A
XV. Discount Rate	6.40%	6.75%





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PRINCIPAL RESULTS OF THE VALUATION

Town of Boxford Plan Liabilities as of the June 30, 2022 Measurement Date

		Town Employees	School Employees	
		and Retirees	and Retirees	Total
I.	Total OPEB Liability			
	A. Actives	2,828,217	7,229,396	10,057,613
	B. Retirees/Disabled	<u>6,120,396</u>	<u>2,526,804</u>	8,647,200
	C. Total	8,948,613	9,756,200	18,704,813
II.	Fiduciary Net Position [Plan Assets]	2,113,549	2,304,291	4,417,840
III.	Net OPEB Liability (Asset) [I II.]	6,835,064	7,451,909	14,286,973
For t	he Reporting Date and Fiscal Year Ending June 30, 2022			
IV.	Service Cost	65,135	267,452	332,587
V.	Financial Statement Expense/(Income)	930,617	1,215,091	2,145,708
VI.	Employer Share of Costs	(194,980)	(626,173)	(821,153)
VII.	Employer OPEB Trust (Contribution)/Withdrawal	(143,524)	(156,476)	(300,000)
VIII.	Total Employer Contribution [VI. + VII.]	(338,504)	(782,649)	(1,121,153)





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PRINCIPAL RESULTS OF THE VALUATION

CURRENT FUNDING POLICY (OPEN GROUP)

	Funding - 6.40% discount rate											
For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with an expected 6.41% return	III. Net OPEB Liability (Asset) [I II.]	IV. Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Benefit Payments (With Implicit Cost)		VIII. Gross Trust Contributions [VI. + VII.]	IX. Benefit Payments Reimbursed from the Trust	X. Administrative & Investment Expenses Reimbursed from the Trust	XI. Total Employer Payments Less Reimbursements [VIII IX X.]
2022	June 30, 2022	18,704,813	4,417,840	14,286,973	23.62%	332,587	821,153	300,000	1,121,153	821,153	0	300,000
2023	June 30, 2023	19,603,134	5,010,489	14,592,645	25.56%	432,836	736,134	300,000	1,036,134	736,134	0	300,000
2024	June 30, 2024	20,383,187	5,641,127	14,742,060	27.68%	452,244	820,779	300,000	1,120,779	820,779	0	300,000
2025	June 30, 2025	21,126,908	6,312,189	14,814,719	29.88%	470,296	942,135	300,000	1,242,135	942,135	0	300,000
2026	June 30, 2026	21,885,940	7,026,266	14,859,674	32.10%	483,764	986,708	300,000	1,286,708	986,708	0	300,000
2027	June 30, 2027	22,652,014	7,786,115	14,865,899	34.37%	504,088	1,060,867	300,000	1,360,867	1,060,867	0	300,000
2028	June 30, 2028	23,367,921	8,594,671	14,773,250	36.78%	519,339	1,197,688	300,000	1,497,688	1,197,688	0	300,000
2029	June 30, 2029	24,070,050	9,455,055	14,614,995	39.28%	533,565	1,270,413	300,000	1,570,413	1,270,413	0	300,000
2030	June 30, 2030	24,765,932	10,370,590	14,395,342	41.87%	549,691	1,350,371	300,000	1,650,371	1,350,371	0	300,000
2031	June 30, 2031	25,428,547	11,344,810	14,083,737	44.61%	567,898	1,462,171	300,000	1,762,171	1,462,171	0	300,000
2032	June 30, 2032	26,068,622	12,381,478	13,687,144	47.50%	580,539	1,531,549	300,000	1,831,549	1,531,549	0	300,000
2033	June 30, 2033	26,744,378	13,484,596	13,259,782	50.42%	598,086	1,564,455	300,000	1,864,455	1,564,455	0	300,000
2034	June 30, 2034	27,405,298	14,658,424	12,746,874	53.49%	617,336	1,589,314	300,000	1,889,314	1,589,314	0	300,000
2035	June 30, 2035	28,127,874	15,907,495	12,220,379	56.55%	635,678	1,619,827	300,000	1,919,827	1,619,827	0	300,000
2036	June 30, 2036	28,953,325	17,236,631	11,716,694	59.53%	655,096	1,588,444	300,000	1,888,444	1,588,444	0	300,000
2037	June 30, 2037	29,763,885	18,650,965	11,112,920	62.66%	674,368	1,660,351	300,000	1,960,351	1,660,351	0	300,000
2038	June 30, 2038	30,616,373	20,155,958	10,460,415	65.83%	695,027	1,649,613	300,000	1,949,613	1,649,613	0	300,000
2039	June 30, 2039	31,527,646	21,757,421	9,770,225	69.01%	716,093	1,693,580	300,000	1,993,580	1,693,580	0	300,000
2040	June 30, 2040	32,463,755	23,461,537	9,002,218	72.27%	738,391	1,774,935	300,000	2,074,935	1,774,935	0	300,000
2041	June 30, 2041	33,399,049	25,274,887	8,124,162	75.68%	761,576	1,819,905	300,000	2,119,905	1,819,905	0	300,000
2042	June 30, 2042	34,395,557	27,204,473	7,191,084	79.09%	786,560	1,885,809	300,000	2,185,809	1,885,809	0	300,000
2043	June 30, 2043	35,311,928	29,257,745	6,054,183	82.86%	811,429	1,981,173	300,000	2,281,173	1,981,173	0	300,000
2044	June 30, 2044	36,247,725	31,442,632	4,805,093	86.74%	838,757	2,045,408	300,000	2,345,408	2,045,408	0	300,000
2045	June 30, 2045	37,234,550	33,767,570	3,466,980	90.69%	867,946	2,122,355	300,000	2,422,355	2,122,355	0	300,000
2046	June 30, 2046	38,290,599	36,241,537	2,049,062	94.65%	899,021	2,194,857	300,000	2,494,857	2,194,857	0	300,000
2047	June 30, 2047	39,286,305	38,874,085	412,220	98.95%	930,935	2,287,457	300,000	2,587,457	2,287,457	0	300,000
2048	June 30, 2048	40,417,565	41,675,380	(1,257,815)	103.11%	964,410	2,274,242	300,000	2,574,242	2,274,242	0	300,000
2049	June 30, 2049	41,618,405	43,047,677	(1,429,272)	103.43%	999,887	2,259,246	(1,259,359)	999,887	2,259,246	0	(1,259,359)
2050	June 30, 2050	42,881,944	44,518,468	(1,636,524)	103.82%	1,036,530	2,285,682	(1,249,152)	1,036,530	2,285,682	0	(1,249,152)
2051	June 30, 2051	44,234,171	46,070,448	(1,836,277)	104.15%	1,075,487	2,337,327	(1,261,840)	1,075,487	2,337,327	0	(1,261,840)
2052	June 30, 2052	45,580,423	47,743,801	(2,163,378)	104.75%	1,115,831	2,356,449	(1,240,618)	1,115,831	2,356,449	0	(1,240,618)





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EXHIBIT A

<u>FINANCIAL STATEMENT DISCLOSURES</u> (As of the June 30, 2022 Measurement Date)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions require the following disclosures in the financial statements:

1. <u>OPEB Expense Development</u>

	Components of the Town's OPEB Expenses for the Fiscal Year Ending June 3	0, 2022					
Des	Description						
I.	Service Cost	332,587					
II.	Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,025,753					
III.	Deferred (Inflows)/Outflows from Plan Experience*	154,349					
IV.	Deferred (Inflows)/Outflows from Changes of Assumptions*	973,928					
V.	Projected Earnings on OPEB Plan Investments	(300,804)					
VI.	Deferred (Inflows)/Outflows from Earnings on Plan Investments**	(40,105)					
VII.	OPEB Plan Administrative Expense	0					
VIII	. Other Changes in Fiduciary Net Position	0					
IX.	Financial Statement Expense/(Income) Prior to Plan Design Changes [I. + II.+ + VII. + VIII.]	2,145,708					
X.	Expense Related to Change in Benefit Terms***	0					
XI.	Financial Statement Expense/(Income) [IX. + X.]	2,145,708					
* Ar	nortized over 5.00 years						

** Amortized over 5.00 years

*** Recognized Immediately





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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

2. <u>Changes in Net OPEB Liability</u>

	Changes in Net OPEB Lia	bility		
			Increase (Decrease)	
		Total OPEB	Plan Fiduciary	Net OPEB
		Liability	Net Position	Liability
I.	Balances for the June 30, 2021 Reporting Date	15,267,628	4,292,646	10,974,982
II.	Prior Period Adjustment	<u>0</u>	<u>0</u>	<u>(</u>
III.	Balances for the June 30, 2021 Reporting Date with Adjustment [I. + II.]	15,267,628	4,292,646	10,974,982
	Changes for the year:			
IV.	Service Cost	332,587	0	332,587
V.	Interest on Total OPEB Liability, Service Cost, and Benefit Payments	1,025,753	0	1,025,753
VI.	Changes in Benefit Terms *	0	0	0
VII.	Change in Assumptions **	3,549,876	0	3,549,876
VIII.	Differences Between Actual and Expected Experience **	(649,878)	0	(649,878
IX.	Net Investment Income	0	(174,806)	174,806
X.	Employer Contributions to Trust	0	1,121,153	(1,121,153
XI.	Benefit Payments Withdrawn from Trust	0	(821,153)	821,153
XII.	Benefit Payments Excluding Implicit Cost	(658,812)	0	(658,812
XIII.	Implicit Cost Amount	(162,341)	0	(162,341
XIV.	Total Benefit Payments Including Implicit Cost [XII. + XIII.]	(821,153)	0	(821,153
XV.	Administrative Expense	0	0	0
XVI.	Other Charges	0	0	0
XVII.	Net Changes [IV.+V.+VI.+VII.+VIII.+IX.+X.+XI.+XIV.+XV.+XVI.]	3,437,185	125,194	3,311,991
xvII	. Balances for the June 30, 2022 Reporting Date [III.+XVII.]	18,704,813	4,417,840	14,286,973

** Amortized over 5.00 years





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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

3. <u>Changes in Net OPEB Expense</u>

Deferr	ed (Inflows)/Outflow	ws in OPEB Exp	ense Arising	from the Rec	ognition of t	he Effects of	Differences	Between				
	Expected & Actual Experience											
Fiscal Year	Differences Between Actual & Expected Experience	Recognition Period (Years)	<u>2022</u>	2023	<u>2024</u>	2025	2026	<u>2027</u>				
2017												
2018	1,854,235	5.00	370,847									
2019	0	5.00	0	0								
2020	(442,134)	5.11	(86,523)	(86,523)	(86,523)	(9,519)						
2021	0	5.11	0	0	0	0	0					
2022	(649,878)	5.00	(129,975)	(129,975)	(129,975)	(129,975)	(129,978)					
2023												
2024												
2025												
2026												
Total Ren	naining Balance											
Net incre	ase (decrease) in OPEB	Expense	154,349	(216,498)	(216,498)	(139,494)	(129,978)	0				

De	Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Changes in Assumptions										
Fiscal Year	Differences from Changes in Actuarial Assumptions	Recognition Period (years)	<u>2022</u>	<u>2023 </u>	<u>2024 </u>	<u>2025</u>	<u>2026</u>	<u>2027</u>			
2017		_									
2018	0	5.00	0								
2019	0	5.00	0	0							
2020	907,664	5.11	177,625	177,625	177,625	19,539					
2021	441,137	5.11	86,328	86,328	86,328	86,328	9,497				
2022	3,549,876	5.00	709,975	709,975	709,975	709,975	709,976				
2023											
2024											
2025											
2026											
Fotal Rem	aining Balance										
Net increa	se (decrease) in OPEB	Expense	973,928	973,928	973,928	815,842	719,473	0			





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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2022 Measurement Date)

3. Changes in Net OPEB Expense (Continued)

Deferi	red (Inflows)/Outflo	ows in OPEB Exp	ense Arising	from the Re	cognition of	Differences	Between Pro	jected &				
	Actual Earnings on OPEB Plan Investments											
Fiscal Year	Differences Between Actual & Expected Earnings	Recognition Period (years)	<u>2022</u>	<u>2023 </u>	<u>2024 </u>	<u>2025 </u>	<u>2026</u>	<u>2027</u>				
2017												
2018	(95,013)	5.00	(19,001)									
2019	22,510	5.00	4,502	4,502								
2020	139,035	5.00	27,807	27,807	27,807							
2021	(742,675)	5.00	(148,535)	(148,535)	(148,535)	(148,535)						
2022	475,610	5.00	95,122	95,122	95,122	95,122	95,122					
2023												
2024												
2025												
2026												
otal Rem	aining Balance											
Vet increa	se (decrease) in OPEB	Expense	(40,105)	(21,104)	(25,606)	(53,413)	95,122	0				





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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

3. <u>Changes in Net OPEB Expense (Continued)</u>

Statement of (Inflows) & Outflows Arising from Current & Prior Reporting June 30, 2022 to be Reported for the Fiscal Year E		ement Period Endin	g on
	Deferred Outflows of Resources	Deferred Inflows of Resources	Total
I. Contributions Made Subsequent to the Measurement Date	0	0	0
II. Differences Between Actual & Expected Experience	0	(702,468)	(702,468)
III. Changes of Assumptions	3,483,171	0	3,483,171
IV. Net Difference Between Projected & Actual Earnings on OPEB Plan Investments	0	(5,001)	(5,001)
VI. Total [I. + II. + III. + IV.]	3,483,171	(707,469)	2,775,702





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EXHIBIT A

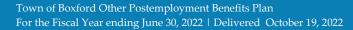
FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

3. <u>Changes in Net OPEB Expense (Continued)</u>

Annual Amortization of Deferred (Inflows) & Outflows					
The balance of deferred (inflows) & outflows as of the Reporting Date of June 30, 2022 will be reco below.	gnized in future y	ears as shown			
Year ending June 30:					
2023	736,326				
2024	731,824				
2025	622,935				
2026	684,617				
2027	0				
Thereafter	0				

4. <u>Discount Rate</u>

The discount rate used to measure the Total OPEB liability was 6.40% as of June 30, 2022 and 6.75% as of June 30, 2021. The projection of cash flows used to determine the discount rate assumed that contributions will be made in accordance with the Town's funding policy. Based on these assumptions, the OPEB Plan's Fiduciary Net Position is projected to be insufficient to make all projected benefit payments to current plan members. Therefore, the long-term expected rate of return on the OPEB Plan assets is applied to the projected benefits payments which the Fiduciary Net Position is expected to be sufficient to cover until Fiscal Year 2094 and the Municipal Bond Rate is applied thereafter. The Municipal Bond Rate is based on the S&P Municipal Bond 20 – Year High Grade Index ("SAPIHG"), which was 4.09% as of June 30, 2022. The S&P Municipal Bond 20 - Year High Grade Index rate for 20 – Year, tax exempt general obligation municipal bonds with an average rate of AA/Aa or higher.







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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

5. Funding Policy

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. For the period ending on the June 30, 2022 Measurement Date, total Town premiums plus implicit costs for the retiree medical program were \$821,153. The Town also contributed \$300,000 to an OPEB Trust for a total contribution during the measurement period of \$1,121,153 to be reported on the financial statement for the fiscal year ending June 30, 2022.

6. Investment Policy

The chart below shows how the long-term rate of return on assets is developed based on the Town's Investment Policy.

Investment Target	Allocation & E	xpected Long-Term Real Rate of Return	
Asset Class	Target Allocation	Asset Class	Long-Term Expected Real Rate of Return*
	14.50%		4.42%
Domestic Equity - Large Cap		Domestic Equity - Large Cap	
Domestic Equity - Small/Mid Cap	3.50%	Domestic Equity - Small/Mid Cap	4.81%
International Equity - Developed Market	16.00%	International Equity - Developed Market	4.91%
International Equity - Emerging Market	6.00%	International Equity - Emerging Market	5.58%
Domestic Fixed Income	20.00%	Domestic Fixed Income	1.00%
International Fixed Income	3.00%	International Fixed Income	1.04%
Alternatives	23.00%	Alternatives	5.98%
Real Estate	14.00%	Real Estate	6.25%
Cash	<u>0.00%</u>	Cash	<u>0.00%</u>
Total	100.00%		
		I. Real Rate of Return	4.41%
		II. Inflation Assumption	2.50%
		III. Total Nominal Return [I. + II.]	6.91%
		IV. Investment Expense	0.50%
		V.Net Investment Return* [IIIIV.]	6.41%

* Mean Geometric Returns based on 2021 Horizon Survey of Capital Market Assumptions





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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

7. Schedule of The Town's Contributions

For the Fiscal Year Ending	Actuarial Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
June 30, 2022	1,065,932	(1,121,153)	(55,221)	13,762,670	8.15%
June 30, 2021	885,368	(1,076,946)	(191,578)	12,130,527	8.88%
June 30, 2020	1,135,524	(1,027,697)	107,827	11,777,211	8.73%
June 30, 2019	1,120,810	(1,000,522)	120,288	10,980,482	9.11%
June 30, 2018	989,774	(989,372)	402	10,660,662	9.28%
June 30, 2017	992,163	(797,053)	195,110	11,605,943	6.87%





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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

8. Effect of 1% Change in Healthcare Trend

Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2022 Measurement Date				
	<u>1% Decrease</u>	Current Trend Rate	<u>1% Increase</u>	
Net OPEB Liability (Asset)	12,008,515	14,286,973	17,071,839	

9. Effect of 1% Change in Discount Rates

Impact of a 1% Change in the Discount Rate as of the June 30, 2022 Measurement Date				
	<u>Cu</u>	urrent Discount Rate		
	<u>1% Decrease</u>	<u>6.40%</u>	<u>1% Increase</u>	
Net OPEB Liability (Asset)	16,804,835	14,286,973	12,216,186	





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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

10. Money Weighted Rate of Return

	Plan Investments / Net External Invested		Period Weight
	Cash Flows		
I. Beginning value - June 30, 2021	4,292,646	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	300,000	10	0.8333
September	0	9	0.7500
October	0	8	0.6667
November	0	7	0.5833
December	0	6	0.5000
January	0	5	0.4167
February	0	4	0.3333
March	0	3	0.2500
April	0	2	0.1667
May	0	1	0.0833
June	<u>0</u>	0	0.0000
II. Total net external cash flow	300,000		
III. Earnings and increase in fair value	(174,806)		
IV. Ending value - June 30, 2022 [I.+II.+III.]	4,417,840		
Money Weighted Rate of Return	(3.85%)		
Asset Value - June 30, 2022	4,417,840		





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EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

11. OPEB Liability, OPEB Expense

	Fiscal Year Ending June 30, 2022		
	Town School		
	Employees and	Employees and	
	Retirees	Retirees	Total
I. Total OPEB Liability as of June 30, 2022	8,948,613	9,756,200	18,704,813
II. Fiduciary Net Position as of June 30, 2022	2,113,549	2,304,291	4,417,840
III. Net OPEB Liability (Asset) as of June 30, 2022 [I II.]	6,835,064	7,451,909	14,286,973
IV. Service Cost	65,135	267,452	332,587
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	488,821	536,932	1,025,753
VI. Projected Earnings on OPEB Plan Investments	(143,934)	(156,870)	(300,804)
VII. Net Recognition of Deferred (Inflows)/Outflows	520,595	567,577	1,088,172
VIII. OPEB Plan Administrative Expense	0	0	0
IX. Expense Related to Change in Benefit Terms	0	0	0
X. Financial Statement Expense/(Income) [IV. + V. + + VIII. + IX.]	930,617	1,215,091	2,145,708
XI. Employer Share of Costs	(194,980)	(626,173)	(821,153)
XII. Employer (Payments) Withdrawals to/from OPEB Trust	(143,524)	(156,476)	(300,000)
XIII. Total Employer Contribution [XI. + XII.]	(338,504)	(782,649)	(1,121,153)
XIV. Net OPEB Expense/(Income) [X. + XIII.]	592,113	432,442	1,024,555





> (1,121,153) 1,024,555

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EXHIBIT A

<u>FINANCIAL STATEMENT DISCLOSURES</u> (As of the June 30, 2022 Measurement Date)

12. <u>OPEB Liability, OPEB Expense and Deferred Inflow/Outflow</u>

Valuation Date	July 1, 2021
For the Measurement Period ending on the Measurement Date of:	June 30, 2022
For the Reporting Period & Fiscal Year ending on:	June 30, 2022
Source of Deferred Inflow/Outflow	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	(702,468)
II. Deferred (Inflow)/Outflow from Investment Experience	(5,001)
III. Deferred (Inflow)/Outflow from Changes in Assumptions	3,483,171
Change in Deferred Inflow/Outflow	
0	1,370,495
I. Deferred Outflow at the beginning of the period	
II. Deferred Outflow created during the period	4,025,486
III. Deferred Outflow recognized during the period	1,472,206
IV. Change in Deferred Outflow (II III.)	2,553,280
V. Deferred Outflow at end of the period (I. + IV.)	3,923,775
VI. Deferred Inflow at the beginning of the period	(882,229)
VII. Deferred Inflow created during the period	(649,878)
VIII. Deferred Inflow recognized during the period	(384,034)
IX. Change in Deferred Inflow (VII VIII.)	(265,844)
X. Deferred Inflow at end of the period (VI. + IX.)	(1,148,073)
N.(OPED I 1.1.11)	
Net OPEB Liability	10.074.000
I. Net OPEB Liability at beginning of period II. Service Cost	10,974,982
	332,587
III. Interest on Total OPEB Liability, Service Cost, and Payments	1,025,753
IV. Projected Investment Income	(300,804)
V. OPEB Plan Administrative Expense	0
VI. Total Employer Contributions	(1,121,153)
VII. Expense Related to Change in Benefit Terms	0
VIII. Net OPEB Expense/(Income) - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + + VI. + VII.)	(63,617)
IX. Deferred Outflow created during the period	4,025,486
X. Deferred Inflow created during the period	(649,878)
XI. Net OPEB Liability at end of period (I. + VIII. + IX. + X.)	14,286,973
Net OPEB Expense	
I. Service Cost	332,587
II. Interest on Total OPEB Liability, Service Cost, and Payments	1,025,753
III. Projected Investment Income	(300,804)
IV. Recognition of Deferred (Inflow)/Outflow	1,088,172
V. OPEB Plan Administrative Expense	0
VI. Expense Related to Change in Benefit Terms	0
VII. Financial Statement Expense/(Income) (I. + II. + III. + IV. + V. + VI.)	2,145,708
VIII. Benefit Payments	(821,153)
IX. Contributions to Trust	(300,000)
	(230)000)



Town of Boxford Other Postemployment Benefits Plan For the Fiscal Year ending June 30, 2022 | Delivered October 19, 2022

X. Total Employer Payments (VIII. + IX.)

XI. Total Net OPEB Expense/(Income) under GASB 75 (IX. + X.)



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<u>EXHIBIT A</u> <u>REQUIRED SUPPLEMENTARY INFORMATION</u>

(As of the June 30, 2022 Measurement Date)

Schedule of C	hanges in the Town's N	Net OPEB Liability a	nd Related Ratios			
Valuation Date	July 1, 2021	July 1, 2019	July 1, 2019	July 1, 2017	July 1, 2017	July 1, 2017
Measurement Date	June 30, 2022	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
For the Reporting Period & Fiscal Year Ending on:	June 30, 2022	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
Total OPEB Liability	18,704,813	15,267,628	14,308,230	13,354,141	12,792,821	10,851,613
I. Service Cost	332,587	299,406	286,453	316,568	297,469	314,494
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	1,025,753	995,801	929,803	895,274	758,436	655,663
III. Changes in Benefit Terms	0	0	0	0	0	0
IV. Difference Between Expected & Actual Plan Experience	(649,878)	0	(442,134)	0	1,894,235	0
V. Changes of Assumptions	3,549,876	441,137	907,664	0	(369,560)	0
VI. Benefit Payments Excluding Implicit Cost	(658,812)	(595,892)	(552,947)	(600,537)	(583,770)	N/A
VII. Implicit Cost Amount	(162,341)	(181,054)	(174,750)	(49,985)	(55,602)	N/A
VIII. Total Benefit Payments	(821,153)	(776,946)	(727,697)	(650,522)	(639,372)	(497,053)
IX. Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
X. Net Change in OPEB Liability [I.+II.+III.+IV.+V.+VIII.+IX.]	3,437,185	959,398	954,089	561,320	1,941,208	473,104
XI. Total OPEB Liability - Beginning of Period	15,267,628	14,308,230	13,354,141	12,792,821	10,851,613	10,378,509
XII. Change Due to Proportional Share	0	0	0	0	0	0
XIII. Total OPEB Liability - Beginning of Period with Adjustment [XI.+XII.]	15,267,628	14,308,230	13,354,141	12,792,821	10,851,613	10,378,509
XIV. Total OPEB Liability - End of Period [XII.+XIII.]	18,704,813	15,267,628	14,308,230	13,354,141	12,792,821	10,851,613
Plan Fiduciary Net Position	4,417,840	4,292,646	3,034,544	2,675,677	2,182,433	1,659,410
XV. Earnings from Plan Investments	(174,806)	958,102	58,867	143,244	173,023	187,870
XVI. Employer Contribution to Trust	1,121,153	1,076,946	1,027,697	1,000,522	989,372	797,053
XVII. Benefit Payments from Trust, Including Refunds of Member Contributions	(821,153)	(776,946)	(727,697)	(650,522)	(639,372)	(497,053)
XVIII. Administrative Expense	0	0	0	0	0	0
XIX. Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
XX. Net Change in Plan Fiduciary Net Position [XV.+XVI.+XVII.+XVIII.+XIX.]	125,194	1,258,102	358,867	493,244	523,023	487,870
XXI. Plan Fiduciary Net Position - Beginning of Period	4,292,646	3,034,544	2,675,677	2,182,433	1,659,410	1,171,540
XXII. Prior Period Adjustment	0	0	0	0	0	0
XXIII. Plan Fiduciary Net Position - Beginning of Period with Adjustment [XXI.+XXII.]	4,292,646	3,034,544	2,675,677	2,182,433	1,659,410	1,171,540
XXIV. Plan Fiduciary Net Position - End of Period [XXII.+XXIII.]	4,417,840	4,292,646	3,034,544	2,675,677	2,182,433	1,659,410
XXV. Net OPEB Liability [XIVXXIV.]	14,286,973	10,974,982	11,273,686	10,678,464	10,610,388	9,192,203
XXVI. Plan Fiduciary Net Position as % of Total OPEB Liability [XXIV./XIV.]	23.62%	28.12%	21.21%	20.04%	17.06%	15.29%
XXVII. Covered Employee Payroll	13,762,670	12,130,527	11,777,211	10,980,482	10,660,662	11,605,943
XXVIII. Plan NOL as % of Covered Employee Payroll [XXV./XXVII.]	103.81%	90.47%	95.72%	97.25%	99.53%	79.20%
Single Discount Rate to Calculate Plan Liabilities	6.40%	6.75%	7.00%	7.00%	7.00%	6.75%



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EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2022 Measurement Date)

The Town's Actuarially Determined Contribution (ADC) is an amount actuarially determined in accordance with the parameters of GASB Statement No. 74/75 which is composed of the service cost and an amortization of the unfunded liability. For FY 2022 and future years we have used a 30-year amortization increasing by 3.00% per year of the Town's unfunded liability for the purpose of calculating ADC. The following table shows the components of the Town's annual ADC and the amount actually contributed to the plan:

Actuarially Determined Contribution - Deficiency / (Excess)						
For the Fiscal Year Ending:	June 30, 2022	<u>June 30, 2021</u>	<u>June 30, 2020</u>	<u>June 30, 2019</u>	<u>June 30, 2018</u>	<u>June 30, 2017</u>
I. Service Cost	332,587	299,406	286,453	316,568	297,469	314,494
II. 30 Year Level Dollar Amortization of NOL	733,345	585,962	849,071	804,242	692,305	677,669
III. Actuarial Determined Contribution [I. + II.]	1,065,932	885,368	1,135,524	1,120,810	989,774	992,163
IV. Contributions in Relation to the Actuarially Determined Contribution	<u>(1,121,153)</u>	<u>(1,076,946)</u>	<u>(1,027,697)</u>	<u>(1,000,522)</u>	<u>(989,372)</u>	<u>(797,053)</u>
V. Contribution Deficiency / (Excess) [III. + IV.]	(55,221)	(191,578)	107,827	120,288	402	195,110
Covered Employee Payroll	13,762,670	12,130,527	11,777,211	10,980,482	10,660,662	11,605,943
Contributions as a % of Covered Employee Payroll	8.15%	8.88%	8.73%	9.11%	9.28%	6.87%
Discount Rate	6.40%	6.75%	7.00%	7.00%	7.00%	6.75%
Money Weighted Rate of Return	(3.85%)	29.70%	2.03%	5.72%	9.02%	13.49%





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EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2022 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of July 1, 2021.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, June 30, 2022.
Actuarial Assumptions:	
Investment Rate of Return:	6.41%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate	4.09% as of June 30, 2022 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
Single Equivalent Discount Rate:	6.40%, net of OPEB plan investment expense, including inflation
Inflation:	2.50% as of June 30, 2022 and for future periods
Salary Increases:	3.00% annually as of June 30, 2022 and for future periods
Cost of Living Adjustment:	Not Applicable





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EXHIBIT B

	<u>REQUIRED SUPPLEMENTARY INFORMATION</u> (As of the June 30, 2022 Measurement Date)
Pre-Retirement Mortality:	General: RP-2014 Mortality Table for Blue Collar Employees projected generationally with scale MP-2016 for males and females, set forward 1 year for females Teachers: RP-2014 Mortality Table for White Collar Employees projected generationally with scale MP-2016 for males and females
Post-Retirement Mortality:	General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year for females Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females
Disabled Mortality:	General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females





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<u>EXHIBIT B</u>

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2022 Measurement Date)

Plan Membership

At July 1, 2021, OPEB plan membership consisted of the following:

Retirees & Beneficiaries:	151
Actives:	<u>181</u>
Total:	332

Events Subsequent to the Measurement Date

To the best of our knowledge there were no material events subsequent to the Measurement Date that would impact the figures shown in this report.

Changes in Assumptions: From June 30, 2021 to June 30, 2022

- ✓ Due to the GASB 75 standards the discount rate has been changed from 6.75% to 6.40%.
- ✓ Due to updated guidance related to the implementation of ASOP 6, we have updated our methodology for calculating expected claims.
- ✓ Based on recent actuarial research we have adopted the Getzen model for future projected healthcare costs.

Contributions/Withdrawals:

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town contributed \$300,000 beyond the pay-as-you-go cost for the period ending on the June 30, 2022 Measurement Date. For the year ending on the June 30, 2022 Measurement Date total Town premiums plus implicit costs for the retiree medical program were \$821,153. \$162,341 of the \$821,153 represents implicit cost.





West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

<u>EXHIBIT B</u>

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2022 Measurement Date)

Census Data Manipulation:

In the absence of data, the following was assumed:

Spouse Sex:	Male participants had female spouses and vice versa.
Spouse Age:	Male spouses were three years older than female spouses and same sex spouses were the same age.
Hire Age:	Participants who were not on the previous valuation were hired halfway between last valuation and the current valuation. If we did not have census data related to the last valuation, the participants were assumed to have been hired at age forty.
Retiree Age:	Retirees had the same birth date as they had the prior valuation. If we did not have census data related to the last valuation, retirees who were enrolled in Active plans were assumed to be age sixty-two and retirees who were enrolled in Medicare Supplement plans were assumed to be age seventy-two. Those not enrolled in a medical plan were assumed to be sixty-seven.
School Demographics:	Two thirds of school participants were teachers.
Other Material Changes:	No other data changes were deemed to be material.





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APPENDIX I - LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES

Table 1: Projection of Contributions using a July 1, 2021 Valuation Date									
For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total Payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]		
June 30, 2022	13,762,670	0	13,762,670	0	821,153	0	821,153		
June 30, 2023	12,644,860	1,530,690	14,175,550	0	736,134	0	736,134		
June 30, 2023	11,624,256	2,976,561	14,600,817	0	820,779	0	820,779		
June 30, 2024	10,728,785	4,310,057	15,038,842	0	942,135	0	942,135		
June 30, 2025	9,841,921	5,648,086	15,490,007	0	986,708	0	986,708		
June 30, 2020	9,217,256	6,737,451	15,954,707	0	1,060,867	0	1,060,867		
-				0		0			
June 30, 2028	8,620,686	7,812,662	16,433,348	0	1,197,688	0	1,197,688		
June 30, 2029	8,034,669	8,891,679	16,926,348		1,270,413		1,270,413		
June 30, 2030	7,533,837	9,900,301	17,434,138	0	1,350,371	0	1,350,371		
June 30, 2031	7,133,230	10,823,932	17,957,162	0	1,462,171	0	1,462,171		
June 30, 2032	6,640,997	11,854,880	18,495,877	0	1,531,549	0	1,531,549		
June 30, 2033	6,132,265	12,918,488	19,050,753	0	1,558,629	5,826	1,564,455		
June 30, 2034	5,782,929	13,839,347	19,622,276	0	1,573,379	15,935	1,589,314		
June 30, 2035	5,432,810	14,778,134	20,210,944	0	1,588,952	30,875	1,619,827		
June 30, 2036	5,102,339	15,714,933	20,817,272	0	1,536,535	51,909	1,588,444		
June 30, 2037	4,786,215	16,655,575	21,441,790	0	1,581,781	78,570	1,660,351		
June 30, 2038	4,521,493	17,563,551	22,085,044	0	1,553,229	96,384	1,649,613		
June 30, 2039	4,217,513	18,530,082	22,747,595	0	1,578,001	115,579	1,693,580		
June 30, 2040	3,946,715	19,483,308	23,430,023	0	1,638,184	136,751	1,774,935		
June 30, 2041	3,717,502	20,415,422	24,132,924	0	1,669,762	150,143	1,819,905		
June 30, 2042	3,476,450	21,380,462	24,856,912	0	1,723,042	162,767	1,885,809		
June 30, 2043	3,279,720	22,322,899	25,602,619	0	1,793,792	187,381	1,981,173		
June 30, 2044	3,028,213	23,342,485	26,370,698	0	1,823,088	222,320	2,045,408		
June 30, 2045	2,789,092	24,372,727	27,161,819	0	1,854,440	267,915	2,122,355		
June 30, 2046	2,529,183	25,447,491	27,976,674	0	1,865,880	328,977	2,194,857		
June 30, 2047	2,340,224	26,475,750	28,815,974	0	1,884,524	402,933	2,287,457		
June 30, 2048	2,151,546	27,528,907	29,680,453	0	1,816,763	457,479	2,274,242		
June 30, 2049	1,956,314	28,614,553	30,570,867	0	1,742,654	516,592	2,259,246		
June 30, 2050	1,800,887	29,687,106	31,487,993	0	1,704,391	581,291	2,285,682		
June 30, 2051	1,624,847	30,807,786	32,432,633	0	1,709,599	627,728	2,337,327		
June 30, 2052	1,493,447	31,912,165	33,405,612	0	1,682,658	673,791	2,356,449		
June 30, 2053	1,332,455	33,075,325	34,407,780	0	1,688,402	735,439	2,423,841		
June 30, 2054	1,207,161	34,232,852	35,440,013	0	1,663,008	806,187	2,469,195		
June 30, 2055	1,084,757	35,418,456	36,503,213	0	1,638,105	886,558	2,524,663		
June 30, 2055	933,656	36,664,653	37,598,309	0	1,635,442	982,841	2,618,283		
June 30, 2056	788,023	37,938,235	38,726,258	0	1,591,397	1,090,042	2,618,283		
June 30, 2057	684,354	37,938,233	39,888,046	0	1,591,397	1,184,539	2,681,439		
				0					
June 30, 2059	545,625	40,539,062	41,084,687		1,433,170	1,283,664	2,716,834		
June 30, 2060	402,296	41,914,932	42,317,228	0	1,392,272	1,388,206	2,780,478		
June 30, 2061	291,297	43,295,448	43,586,745	0	1,335,564	1,483,193	2,818,757		

Odyssey

Town of Boxford Other Postemployment Benefits Plan For the Fiscal Year ending June 30, 2022 | Delivered October 19, 2022



West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

APPENDIX I - LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES (CONTINUED)

Table 1: Projection of Contributions using a July 1, 2021 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total Payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
June 30, 2062	219,686	44,674,661	44,894,347	0	1,288,766	1,578,617	2,867,383
June 30, 2063	152,864	46,088,313	46,241,177	0	1,213,314	1,689,750	2,903,064
June 30, 2064	84,173	47,544,239	47,628,412	0	1,181,396	1,807,114	2,988,510
June 30, 2065	46,801	49,010,463	49,057,264	0	1,127,774	1,937,232	3,065,006
June 30, 2066	32,376	50,496,606	50,528,982	0	1,092,565	2,083,168	3,175,733
June 30, 2067	20,211	52,024,640	52,044,851	0	1,052,946	2,240,094	3,293,040
June 30, 2068	4,593	53,601,604	53,606,197	0	1,025,991	2,396,188	3,422,179
June 30, 2069	0	55,214,383	55,214,383	0	995,452	2,557,770	3,553,222
June 30, 2070	0	56,870,814	56,870,814	0	963,467	2,726,584	3,690,051
June 30, 2071	0	58,576,938	58,576,938	0	922,065	2,885,039	3,807,104
June 30, 2072	0	60,334,246	60,334,246	0	879,703	3,043,949	3,923,652
June 30, 2073	0	62,144,273	62,144,273	0	840,645	3,211,858	4,052,503
June 30, 2074	0	64,008,601	64,008,601	0	802,925	3,380,377	4,183,302
June 30, 2075	0	65,928,859	65,928,859	0	766,282	3,556,334	4,322,616
June 30, 2076	0	67,906,725	67,906,725	0	725,485	3,741,496	4,466,981
June 30, 2077	0	69,943,927	69,943,927	0	683,263	3,932,963	4,616,226
June 30, 2078	0	72,042,245	72,042,245	0	646,687	4,136,341	4,783,028
June 30, 2079	0	74,203,512	74,203,512	0	609,042	4,346,121	4,955,163
June 30, 2080	0	76,429,617	76,429,617	0	571,743	4,564,385	5,136,128
June 30, 2081	0	78,722,506	78,722,506	0	530,896	4,786,662	5,317,558
June 30, 2082	0	81,084,181	81,084,181	0	490,811	5,014,035	5,504,846
June 30, 2083	0	83,516,706	83,516,706	0	454,316	5,248,899	5,703,215
June 30, 2084	0	86,022,207	86,022,207	0	415,251	5,486,672	5,901,923
June 30, 2085	0	88,602,873	88,602,873	0	378,132	5,731,822	6,109,954
June 30, 2086	0	91,260,959	91,260,959	0	341,134	5,987,290	6,328,424
June 30, 2087	0	93,998,788	93,998,788	0	305,902	6,250,992	6,556,894
June 30, 2088	0	96,818,752	96,818,752	0	272,564	6,528,863	6,801,427
June 30, 2089	0	99,723,315	99,723,315	0	241,245	6,816,527	7,057,772
June 30, 2090	0	102,715,014	102,715,014	0	212,015	7,115,264	7,327,279
June 30, 2091	0	105,796,464	105,796,464	0	184,936	7,426,210	7,611,146
June 30, 2092	0	108,970,358	108,970,358	0	159,989	7,745,218	7,905,207
June 30, 2093	0	112,239,469	112,239,469	0	137,206	8,073,530	8,210,736
June 30, 2094	0	115,606,653	115,606,653	0	116,528	8,410,983	8,527,511
June 30, 2095	0	119,074,853	119,074,853	0	97,926	8,759,051	8,856,977
June 30, 2096	0	122,647,099	122,647,099	0	81,331	9,119,489	9,200,820



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West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

APPENDIX I - LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY NET POSITION PROJECTION DISCLOSURES

Table 2: Projection of OPEB Plan's Fiduciary Net Position using a July 1 2021 Valuation Date									
For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	Current Plan		IV. Gross Contributions to Trust for Current Plan Members [II. + III.]	V. Administrative Expenses Withdrawn from the Trust for Current Plan Members	VI. Benefit Payments Withdrawn from the Trust	VII. Trust Withdrawals [V. +VI.]	VIII. Investment Earnings	IX. Ending Fiduciary Net Position for Current Plan Members
June 30, 2022	4,292,646	821,153	300,000	1,121,153	0	821,153	821,153	(174,806)	4,417,840
June 30, 2023	4,417,840	736,134	267,606	1,003,740	0	736,134	736,134	261,048	4,946,494
June 30, 2024	4,946,494	820,779	238,841	1,059,620	0	820,779	820,779	324,606	5,509,941
June 30, 2025	5,509,941	942,135	214,021	1,156,156	0	942,135	942,135	359,940	6,083,902
June 30, 2026	6,083,902	986,708	190,612	1,177,320	0	986,708	986,708	395,992	6,670,506
June 30, 2027	6,670,506	1,060,867	173,314	1,234,181	0	1,060,867	1,060,867	433,048	7,276,868
June 30, 2028	7,276,868	1,197,688	157,375	1,355,063	0	1,197,688	1,197,688	471,413	7,905,656
June 30, 2029	7,905,656	1,270,413	142,405	1,412,818	0	1,270,413	1,270,413	511,246	8,559,307
June 30, 2030	8,559,307	1,350,371	129,639	1,480,010	0	1,350,371	1,350,371	552,742	9,241,688
June 30, 2031	9,241,688	1,462,171	119,171	1,581,342	0	1,462,171	1,462,171	596,152	9,957,011
June 30, 2032	9,957,011	1,531,549	107,716	1,639,265	0	1,531,549	1,531,549	641,643	10,706,370
June 30, 2033	10,706,370	1,558,629	96,567	1,655,196	0	1,564,455	1,564,455	689,325	11,486,436
June 30, 2034	11,486,436	1,573,379	88,414	1,661,793	0	1,589,314	1,589,314	739,070	12,297,985
June 30, 2035	12,297,985	1,588,952	80,642	1,669,594	0	1,619,827	1,619,827	790,845	13,138,597
June 30, 2036	13,138,597	1,536,535	73,530	1,610,065	0	1,588,444	1,588,444	844,504	14,004,722
June 30, 2037	14,004,722	1,581,781	66,966	1,648,747	0	1,660,351	1,660,351	899,816	14,892,934
June 30, 2038	14,892,934		61,419	1,614,648	0	1,649,613	1,649,613	956,575	15,814,544
June 30, 2039	15,814,544	1,578,001	55,621	1,633,622	0	1,693,580	1,693,580	1,015,467	16,770,053
June 30, 2040	16,770,053	1,638,184	50,534	1,688,718	0	1,774,935	1,774,935	1,076,555	17,760,391
June 30, 2041	17,760,391	1,669,762	46,213	1,715,975	0	1,819,905	1,819,905	1,139,899	18,796,360
June 30, 2042	18,796,360	1,723,042	41,958	1,765,000	0	1,885,809	1,885,809	1,206,171	19,881,722
June 30, 2043	19,881,722		38,430	1,832,222	0	1,981,173	1,981,173	1,275,631	21,008,402
June 30, 2044	21,008,402	1,823,088	34,450	1,857,538	0	2,045,408	2,045,408	1,347,726	22,168,258
June 30, 2045	22,168,258	1,854,440	30,805	1,885,245	0	2,122,355	2,122,355	1,421,957	23,353,105
June 30, 2046	23,353,105		27,121	1,893,001	0	2,194,857	2,194,857	1,497,790	24,549,039
June 30, 2047	24,549,039		24,364	1,908,888	0	2,287,457	2,287,457	1,574,362	25,744,832
June 30, 2048	25,744,832		21,747	1,838,510	0	2,274,242	2,274,242	1,650,930	26,960,030
June 30, 2049	26,960,030		19,198	1,761,852	0	2,259,246	2,259,246	1,728,744	28,191,380
June 30, 2050	28,191,380	1,704,391	17,158	1,721,549	0	2,285,682	2,285,682	1,807,609	29,434,856
June 30, 2051	29,434,856		15,030	1,724,629	0	2,337,327	2,337,327	1,887,248	30,709,406
June 30, 2052	30,709,406		13,412	1,696,070	0	2,356,449	2,356,449	1,968,896	32,017,923
June 30, 2053	32,017,923		11,618	1,700,020	0	2,423,841	2,423,841	2,052,715	33,346,817
June 30, 2054	33,346,817		10,219	1,673,227	0	2,469,195	2,469,195	2,137,853	34,688,702
June 30, 2055	34,688,702		8,915	1,647,020	0	2,524,663	2,524,663	2,223,827	36,034,886
June 30, 2056	36,034,886		7,450	1,642,892	0	2,618,283	2,618,283	2,310,071	37,369,566
June 30, 2057	37,369,566		6,105	1,597,502	0	2,681,439	2,681,439	2,395,582	38,681,211
June 30, 2058	38,681,211		5,147	1,519,971	0	2,699,363	2,699,363	2,479,628	39,981,447
June 30, 2059	39,981,447		3,984	1,437,154	0	2,716,834	2,716,834	2,562,936	41,264,703
June 30, 2060	41,264,703		2,852	1,395,124	0	2,780,478	2,780,478	2,645,157	42,524,506
June 30, 2061	42,524,506		2,005	1,337,569	0	2,818,757	2,818,757	2,725,884	43,769,202





West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY POSITION PROJECTION DISCLOSURES (CONTINUED)

Table 2: Projection of OPEB Plan's Fiduciary Net Position using a July 1 2021 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	Current Plan		IV. Gross Contributions to Trust for Current Plan Members [II. + III.]	V. Administrative Expenses Withdrawn from the Trust for Current Plan Members	VI. Benefit Payments Withdrawn from the Trust	VII. Trust Withdrawals [V. +VI.]	VIII. Investment Earnings	IX. Ending Fiduciary Net Position for Current Plan Members
June 30, 2062	43,769,202	1,288,766	1,468	1,290,234	0	2,867,383	2,867,383	2,805,652	44,997,705
June 30, 2063	44,997,705	1,213,314	992	1,214,306	0	2,903,064	2,903,064	2,884,384	46,193,331
June 30, 2064	46,193,331	1,181,396	530	1,181,926	0	2,988,510	2,988,510	2,961,009	47,347,756
June 30, 2065	47,347,756	1,127,774	286	1,128,060	0	3,065,006	3,065,006	3,035,000	48,445,810
June 30, 2066	48,445,810	1,092,565	192	1,092,757	0	3,175,733	3,175,733	3,105,382	49,468,216
June 30, 2067	49,468,216	1,052,946	117	1,053,063	0	3,293,040	3,293,040	3,170,916	50,399,155
June 30, 2068	50,399,155	1,025,991	26	1,026,017	0	3,422,179	3,422,179	3,230,587	51,233,580
June 30, 2069	51,233,580	995,452	0	995,452	0	3,553,222	3,553,222	3,284,072	51,959,882
June 30, 2070	51,959,882	963,467	0	963,467	0	3,690,051	3,690,051	3,330,628	52,563,926
June 30, 2071	52,563,926	922,065	0	922,065	0	3,807,104	3,807,104	3,369,348	53,048,235
June 30, 2072	53,048,235	879,703	0	879,703	0	3,923,652	3,923,652	3,400,392	53,404,678
June 30, 2073	53,404,678	840,645	0	840,645	0	4,052,503	4,052,503	3,423,240	53,616,060
June 30, 2074	53,616,060	802,925	0	802,925	0	4,183,302	4,183,302	3,436,789	53,672,472
June 30, 2075	53,672,472	766,282	0	766,282	0	4,322,616	4,322,616	3,440,405	53,556,543
June 30, 2076	53,556,543	725,485	0	725,485	0	4,466,981	4,466,981	3,432,974	53,248,021
June 30, 2077	53,248,021	683,263	0	683,263	0	4,616,226	4,616,226	3,413,198	52,728,256
June 30, 2078	52,728,256	646,687	0	646,687	0	4,783,028	4,783,028	3,379,881	51,971,796
June 30, 2079	51,971,796	609,042	0	609,042	0	4,955,163	4,955,163	3,331,392	50,957,067
June 30, 2080	50,957,067	571,743	0	571,743	0	5,136,128	5,136,128	3,266,348	49,659,030
June 30, 2081	49,659,030	530,896	0	530,896	0	5,317,558	5,317,558	3,183,144	48,055,512
June 30, 2082	48,055,512	490,811	0	490,811	0	5,504,846	5,504,846	3,080,358	46,121,835
June 30, 2083	46,121,835	454,316	0	454,316	0	5,703,215	5,703,215	2,956,410	43,829,346
June 30, 2084	43,829,346	415,251	0	415,251	0	5,901,923	5,901,923	2,809,461	41,152,135
June 30, 2085	41,152,135	378,132	0	378,132	0	6,109,954	6,109,954	2,637,852	38,058,165
June 30, 2086	38,058,165	341,134	0	341,134	0	6,328,424	6,328,424	2,439,528	34,510,403
June 30, 2087	34,510,403	305,902	0	305,902	0	6,556,894	6,556,894	2,212,117	30,471,528
June 30, 2088	30,471,528	272,564	0	272,564	0	6,801,427	6,801,427	1,953,225	25,895,890
June 30, 2089	25,895,890	241,245	0	241,245	0	7,057,772	7,057,772	1,659,927	20,739,290
June 30, 2090	20,739,290	212,015	0	212,015	0	7,327,279	7,327,279	1,329,388	14,953,414
June 30, 2091	14,953,414	184,936	0	184,936	0	7,611,146	7,611,146	958,514	8,485,718
June 30, 2092	8,485,718	159,989	0	159,989	0	7,905,207	7,905,207	543,935	1,284,435
June 30, 2093	1,284,435	137,206	0	137,206	0	8,210,736	8,210,736	82,332	0
June 30, 2094	0	116,528	0	116,528	0	8,527,511	8,527,511	0	0
June 30, 2095	0	97,926	0	97,926	0	8,856,977	8,856,977	0	0
June 30, 2096	0	81,331	0	81,331	0	9,200,820	9,200,820	0	0





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APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES

Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2021 Valuation Date								
For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments for Current Plan Members	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments [II III.]	V. Present Value of Funded Benefit Payments using the Long-Term Rate of Return [6.41%]	VI. Present Value of Unfunded Benefit Payments using the Municipal Bond Rate [4.09%]	VII. Present Value of Benefit Payments using the Single Equivalent Discount Rate [6.40%]	
June 30, 2022	4,292,646	821,153	821,153	0	821,153	0	821,153	Sum of Column V.
June 30, 2023	4,417,840	736,134	736,134	0	691,790	0	691,834	21,259,588
June 30, 2024	4,946,494	820,779	820,779	0	724,872	0	724,964	
June 30, 2025	5,509,941	942,135	942,135	0	781,926	0	782,074	Sum of Column VI.
June 30, 2026	6,083,902	986,708	986,708	0	769,589	0	769,783	26,320
June 30, 2027	6,670,506	1,060,867	1,060,867	0	777,587	0	777,832	
June 30, 2028	7,276,868	1,197,688	1,197,688	0	824,991	0	825,303	Sum of Column VII.
June 30, 2029	7,905,656	1,270,413	1,270,413	0	822,371	0	822,735	[V. + VI.]
June 30, 2030	8,559,307	1,350,371	1,350,371	0	821,473	0	821,889	21,285,908
June 30, 2031	9,241,688	1,462,171	1,462,171	0	835,904	0	836,379	
June 30, 2032	9,957,011	1,531,549	1,531,549	0	822,823	0	823,343	
June 30, 2033	10,706,370	1,558,629	1,558,629	0	786,930	0	787,476	
June 30, 2034	11,486,436	1,573,379	1,573,379	0	746,524	0	747,090	
June 30, 2035	12,297,985	1,588,952	1,588,952	0	708,499	0	709,081	
June 30, 2036	13,138,597	1,536,535	1,536,535	0	643,855	0	644,425	
June 30, 2037	14,004,722	1,581,781	1,581,781	0	622,888	0	623,478	
June 30, 2038	14,892,934	1,553,229	1,553,229	0	574,800	0	575,381	
June 30, 2039	15,814,544	1,578,001	1,578,001	0	548,789	0	549,379	
June 30, 2040	16,770,053	1,638,184	1,638,184	0	535,400	0	536,009	
June 30, 2041	17,760,391	1,669,762	1,669,762	0	512,847	0	513,463	
June 30, 2042	18,796,360	1,723,042	1,723,042	0	497,333	0	497,961	
June 30, 2043	19,881,722	1,793,792	1,793,792	0	486,565	0	487,211	
June 30, 2044	21,008,402	1,823,088	1,823,088	0	464,723	0	465,369	
June 30, 2045	22,168,258	1,854,440	1,854,440	0	444,239	0	444,885	
June 30, 2046	23,353,105	1,865,880	1,865,880	0	420,054	0	420,691	
June 30, 2047	24,549,039	1,884,524	1,884,524	0	398,695	0	399,325	
June 30, 2048	25,744,832	1,816,763	1,816,763	0	361,206	0	361,799	
June 30, 2049	26,960,030	1,742,654	1,742,654	0	325,601	0	326,156	
June 30, 2050	28,191,380	1,704,391	1,704,391	0	299,268	0	299,798	
June 30, 2051	29,434,856	1,709,599	1,709,599	0	282,100	0	282,617	
June 30, 2052	30,709,406	1,682,658	1,682,658	0	260,929	0	261,424	
June 30, 2053	32,017,923	1,688,402	1,688,402	0	246,048	0	246,530	
June 30, 2054	33,346,817	1,663,008	1,663,008	0	227,749	0	228,210	
June 30, 2055	34,688,702	1,638,105	1,638,105	0	210,825	0	211,264	
June 30, 2056	36,034,886	1,635,442	1,635,442	0	197,803	0	198,228	
June 30, 2057	37,369,566	1,591,397	1,591,397	0	180,881	0	190,220	
June 30, 2058	38,681,211	1,591,597	1,514,824	0	161,806	0	162,174	
June 30, 2059	39,981,447	1,433,170	1,433,170	0	143,862	0	144,199	
June 30, 2009	41,264,703	1,392,272	1,392,272	0	143,882	0	131,654	
June 30, 2060	41,264,703	1,392,272	1,392,272	0	118,399	0	131,634	
June 50, 2001	42,524,506	1,333,364	1,333,364	0	118,399	0	118,691	





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APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES (CONTINUED)

Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2021 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments for Current Plan Members	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments [II III.]	V. Present Value of Funded Benefit Payments using the Long-Term Rate of Return [6.41%]	VI. Present Value of Unfunded Benefit Payments using the Municipal Bond Rate [4.09%]	VII. Present Value of Benefit Payments using the Single Equivalent Discount Rate [6.40%]
June 30, 2062	43,769,202	1,288,766	1,288,766	0	107,368	0	107,640
June 30, 2063	44,997,705	1,213,314	1,213,314	0	94,993	0	95,240
June 30, 2064	46,193,331	1,181,396	1,181,396	0	86,923	0	87,154
June 30, 2065	47,347,756	1,127,774	1,127,774	0	77,979	0	78,191
June 30, 2066	48,445,810	1,092,565	1,092,565	0	70,994	0	71,191
June 30, 2067	49,468,216	1,052,946	1,052,946	0	64,298	0	64,481
June 30, 2068	50,399,155	1,025,991	1,025,991	0	58,878	0	59,049
June 30, 2069	51,233,580	995,452	995,452	0	53,684	0	53,844
June 30, 2070	51,959,882	963,467	963,467	0	48,829	0	48,977
June 30, 2071	52,563,926	922,065	922,065	0	43,916	0	44,052
June 30, 2072	53,048,235	879,703	879,703	0	39,374	0	39,499
June 30, 2073	53,404,678	840,645	840,645	0	35,360	0	35,474
June 30, 2074	53,616,060	802,925	802,925	0	31,739	0	31,843
June 30, 2075	53,672,472	766,282	766,282	0	28,466	0	28,561
June 30, 2076	53,556,543	725,485	725,485	0	25,327	0	25,413
June 30, 2077	53,248,021	683,263	683,263	0	22,416	0	22,494
June 30, 2078	52,728,256	646,687	646,687	0	19,938	0	20,008
June 30, 2079	51,971,796	609,042	609,042	0	17,646	0	17,710
June 30, 2080	50,957,067	571,743	571,743	0	15,568	0	15,625
June 30, 2081	49,659,030	530,896	530,896	0	13,585	0	13,635
June 30, 2082	48,055,512	490,811	490,811	0	11,802	0	11,847
June 30, 2083	46,121,835	454,316	454,316	0	10,267	0	10,306
June 30, 2084	43,829,346	415,251	415,251	0	8,819	0	8,853
June 30, 2085	41,152,135	378,132	378,132	0	7,547	0	7,577
June 30, 2086	38,058,165	341,134	341,134	0	6,398	0	6,424
June 30, 2087	34,510,403	305,902	305,902	0	5,392	0	5,414
June 30, 2088	30,471,528	272,564	272,564	0	4,515	0	4,534
June 30, 2089	25,895,890	241,245	241,245	0	3,755	0	3,771
June 30, 2090	20,739,290	212,015	212,015	0	3,102	0	3,115
June 30, 2091	14,953,414	184,936	184,936	0	2,542	0	2,553
June 30, 2092	8,485,718	159,989	159,989	0	2,067	0	2,076
June 30, 2093	1,284,435	137,206	137,206	0	1,666	0	1,673
June 30, 2094	0	116,528	0	116,528	0	6,503	1,336
June 30, 2095	0	97,926	0	97,926	0	5,250	1,055
June 30, 2096	0	81,331	0	81,331	0	4,189	823





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July 1 through June 30. Plan Year Premium Effective Date Medicare Supplement Plans: effective January 1, 2022 Active Plans: effective July 1, 2022 **Dental Plans:** N/A **Creditable Service** Elapsed time from date of hire to termination of service date. **Benefits Offered** Comprehensive Medical Insurance offered. Medicare Part A To the best of our knowledge the Town does not pay any Medicare Part A premiums or penalties. Medicare Part B Medicare Part B Premium reimbursements by the Town were not reflected in this valuation. Medicare Part B Penalty reimbursements by the Town were not reflected in this valuation. Surviving Spouse Coverage Surviving spouses pay 100% of premiums.

APPENDIX II - PLAN PROVISIONS





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APPENDIX II – PLAN PROVISIONS

Eligibility

Hire Date	Eligibility
Before April 2, 2012	• Age 55 with 10 years of creditable service
before April 2, 2012	•20 years of service regardless of age
On or after April 2, 2012	•Age 60 with 10 years of creditable service

Participant Contributions

Group	Individual	Two-Person / Family	
•50% for Medex 2			
Medical	•34% for Managed Blue for Seniors	•34% for all family plans	
	•21% for all other individual plans		
Dental	N/A	N/A	
Life	N/A	N/A	





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APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

<u>Pre-Retirement Mortality</u>	General: RP-2014 Mortality Table for Blue Collar Employees projected generationally with scale MP-2016 for males and females, set forward 1 year for females Teachers: RP-2014 Mortality Table for White Collar Employees projected generationally with scale MP-2016 for males and females
<u>Post-Retirement Mortality</u>	General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year for females Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females
<u>Disabled Mortality</u>	General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females
Assumption Experience Study	The actuarial assumptions used to calculate the actuarial accrued liability and the service cost primarily reflect the latest experience studies of the Massachusetts PERAC issued in 2014 and their most recent analysis of retiree mortality during 2015 and 2016.
Discount Rate	6.40% per annum (previously 6.75%)
Net Long Term Rate of Return	6.41% (based on investment policy)
Municipal Bond Rate	4.09% as of June 30, 2022 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
Actuarial Cost Method	Individual Entry Age Normal
Asset-Valuation Method	Market Value of Assets as of the Measurement Date, June 30, 2022





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APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Employee Termination

It was assumed that employees would terminate employment in accordance with the sample rates shown in the following table:

Service	Male	Female
0	15.00%	15.00%
5	7.60%	7.60%
10	5.40%	5.40%
15	3.30%	3.30%
20	2.00%	2.00%





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APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

Retirement Rates for Eligible Employees

	Standard	Standard	Male	Female	Public
Age	Male	Female	Teachers	Teachers	Safety
45 - 49	0.00%	0.00%	0.00%	0.00%	6.00%
50 - 51	3.00%	3.00%	2.00%	1.50%	6.00%
52	3.00%	3.00%	2.00%	1.50%	6.00%
53	3.00%	3.00%	2.00%	1.50%	7.50%
54	3.00%	3.50%	2.00%	2.00%	15.00%
55	3.50%	5.00%	6.00%	5.00%	25.00%
56	3.50%	5.00%	20.00%	15.00%	15.00%
57	4.00%	5.50%	40.00%	35.00%	15.00%
58	5.00%	6.00%	50.00%	35.00%	15.00%
59	6.00%	6.50%	50.00%	35.00%	15.00%
60	9.00%	7.50%	40.00%	35.00%	20.00%
61	11.00%	10.00%	40.00%	35.00%	20.00%
62	15.00%	15.00%	35.00%	35.00%	20.00%
63	15.00%	15.00%	35.00%	35.00%	20.00%
64	16.00%	15.00%	35.00%	35.00%	30.00%
65	20.00%	20.00%	35.00%	35.00%	50.00%
66	20.00%	20.00%	40.00%	35.00%	25.00%
67	20.00%	20.00%	40.00%	30.00%	25.00%
68	20.00%	20.00%	40.00%	30.00%	25.00%
69	20.00%	20.00%	40.00%	30.00%	25.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
71	100.00%	100.00%	100.00%	100.00%	100.00%
72	100.00%	100.00%	100.00%	100.00%	100.00%

Permanent Disability Rates

			Public
Age	Standard	Teachers	Safety
20	0.01%	0.05%	0.20%
30	0.01%	0.07%	0.21%
40	0.07%	0.21%	0.71%
50	0.13%	0.42%	1.10%
60	0.12%	0.50%	0.80%



Town of Boxford Other Postemployment Benefits Plan For the Fiscal Year ending June 30, 2022 | Delivered October 19, 2022



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APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

Trend Rate

Medicare Part A & B Premiums & Penalties: N/A

Medical Plans: Rates were developed using the SOA Getzen Model of Long-Run Medical Cost Trends with the following model input variables:

Inflation (CPI):	2.50%
Real GDP (per capita):	1.10%
Excess Medical Cost Growth:	1.10%
Expected Health Share of GDP in 2030:	21%
Health Share of GDP Resistance Point:	22.5%
Year for Limiting Cost Growth to GDP Growth:	2060

See below for a table of trend rates for select years:

Year	Rate
2021	9.00%
2022	8.00%
2023	6.50%
2024	5.00%
2025	4.96%
2026	4.92%
2027	4.88%
2028	4.84%
2029	4.81%
2030 - 2037	4.77%
2050	4.38%
2060+	3.63%





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APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

Participation Rate	It was assumed that 80% of employees eligible to receive retirement benefits would enroll in the retiree medical plans upon retirement
Spouse Participation Rate	It was assumed that 80% of male employees and 70% of female employees who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement.
<u>Medicare Eligibility</u>	It was assumed that retirees who were over age 66 on the valuation date and were enrolled in an Active plan were ineligible for Medicare and all other participants would be eligible for Medicare at age 65, absent any information to the contrary.
Compensation Increases	3.00% per year.
Inflation Rate	2.50% per year.
<u>COVID–19</u>	We recognize that COVID–19 may impact plan experience. We have reviewed the assumptions used in this report. Based on the data that is currently available, we have not made any adjustments to these assumptions to reflect the impact of COVID–19. We will continue to monitor the impact of COVID–19 to determine if adjustments to valuation assumptions are warranted.





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APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

Implicit Subsidy

The implicit subsidy arises because retirees who are not eligible for Medicare are charged the same premium as active employees, even though their actual medical costs are higher on average. Consequently, a portion of the premiums being paid for active employees are being used to "subsidize" the premiums of retirees. Actuarial Standards of Practice and GASB standards require the liability associated with this implicit subsidy to be valued. The chart below shows a breakdown of how implicit cost impacts reported cash flows and liabilities. Actuarial Standard of Practice No. 6 ("ASOP 6") requires us to recognize this implicit subsidy while the plan sponsor may only pay the premiums billed by an insurance provider.

Impact of Implicit Subsidy				
As of the Measurement Date				
Impact on Liability	June 30, 2022	<u>June 30, 2021</u>		
I. Total OPEB Liability	18,704,813	15,267,628		
II. Total OPEB Liability (Excluding Implicit Subsidy)	<u>14,349,199</u>	<u>13,175,720</u>		
III. Liability from Implicit Subsidy [I II.]	4,355,614	2,091,908		

	For the Measurement Period Ending		
Impact on Payments	<u>June 30, 2022</u>	<u>June 30, 2021</u>	
IV. Employer Payments (Including Implicit Subsidy)	821,153	776,946	
V. Actual Employer Payments	<u>658,812</u>	<u>595,892</u>	
VI. Implicit Subsidy [IV V.]	162,341	181,054	





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APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

Pre-65 and post-65 per capita costs were developed using fully insured premium rates.

ACTIVE EMPLOYEES					NOT MED LIGIBLE	ICARE
Age Bracket	Female	Male	Ag	ge Bracket	Female	Male
24 & Under	4,659	2,937	44	& Under	9,158	6,001
25 to 29	6,873	3,056		45 to 49	10,059	7,576
30 to 34	8,685	3,836	,	50 to 54	11,833	9 <i>,</i> 978
35 to 39	8,947	4,817		55 to 59	13,679	12,972
40 to 44	9,158	6,001		60 to 64	16,278	16,647
45 to 49	10,059	7,576		65 to 69	19,513	20,764
50 to 54	11,833	9,978		70 to 74	23,010	24,883
55 to 59	13,679	12,972		75 to 79	26,723	29,389
60 to 64	16,278	16,647		80 to 84	30,639	33,781
65 to 69	19,513	20,764		85 to 89	34,974	38,667
70 & Over	23,010	24,883	9	0 & Over	34,974	38,667

ANNUAL PER CAPITA CLAIMS*

RETIREE - MEDICARE ELIGIBLE								
Age Bracket Female Male								
65 to 69	2,989	3,070						
70 to 74	3,527	3,679						
75 to 79	4,092	4,344						
80 to 84	4,692	4,993						
85 to 89	5,246	5,562						
90 & Over	5,246	5,562						

*Based on SOA 'Health Care Costs--From Birth to Death' study published in 2013





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APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Open Group Forecast

For the projection of plan liabilities in future years, it was assumed that the number of active employees will remain constant and those who terminate employment or retire will be replaced with new employees with the demographics below:

Open Group Forecast Population								
Demographics								
Age Male Female								
20	8.0%	5.0%						
30	7.0%	14.0%						
40	20.0%	19.0%						
50	10.0%	10.0%						
60	<u>3.0%</u>	<u>4.0%</u>						
Total	48.0%	52.0%						

Additional Comments

The liabilities being reported as of the Measurement Date of June 30, 2022 reflect a closed group and do not reflect any new entrants after the valuation date.

To the best of our knowledge all employees who are eligible on the valuation date are included in the actuarial valuation.





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APPENDIX IV – PLAN DEMOGRAPHICS

Active Employees

Valuation Date	July 1, 2021	July 1, 2019
A. Average Age at Hire	37.40	36.75
B. Average Service	<u>10.45</u>	<u>11.47</u>
C. Average Current Age	47.85	48.22

Retired Employees & Spouses

Valuation Date	July 1, 2021	July 1, 2019
A. Under Age 65	20	24
B. Age 65 & Over	<u>131</u>	<u>122</u>
C. Total	151	146

Average Service Age

		Years of Service								
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-24	5									5
25-29	10	2								12
30-34	9	3	1							13
35-39	12	2	3	5						22
40-44	12	3	2		1					18
45-49	9	6	3	5	4					27
50-54	4	5	6	6	4	4	1			30
55-59	6	1	4	4	2	4	1		1	23
60-64	3	4	7	3	3					20
65-69		2	1	4	1	2	1			11
70+										
Total	70	28	27	27	15	10	3		1	181





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APPENDIX IV - PLAN DEMOGRAPHICS

<u>Plan Offerings</u>	Number of Contracts				
	<u>Single</u>	Two-Person	<u>Family</u>	<u>Total</u>	
HMO Blue	56		72	128	
Blue Care Elect	5		12	17	
Managed Blue for Seniors	89			89	
Medex 2	<u>40</u>			<u>40</u>	
Total	190	0	84	274	
	Per Contract Costs (monthly)				
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>		
HMO Blue	895.33		2,391.94		
Blue Care Elect	1,058.36		2,831.89		
Managed Blue for Seniors	337.58	675.16			
Medex 2	382.48	764.96			
Dental Plan	N/A		N/A		





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APPENDIX IV - PLAN DEMOGRAPHICS

	Active Plan Average Premium Calculation						
		Number of Total Premiums Claims Witho					
	Single	Two-Person	Family	Participants	Paid	Children	
HMO Blue	56		72	200	2,668,297.92	2,148,792.00	
Blue Care Elect	5		12	29	471,293.76	368,309.28	
Total	61	0	84	229	3,139,591.68	2,517,101.28	
				Blended Ave	erage Monthly Rate:	\$ 915.98	

	Medicare Supplement Plan Average Premium Calculation					
	Number of Total Premiums Claims Without					
	Single	Two-Person	Family	Participants	Paid	Children
Managed Blue for Seniors	89			89	360,535.44	360,535.44
Medex 2	40			40	183,590.40	183,590.40
Total	129	0	0	129	544,125.84	544,125.84
			Blended Average Monthly Rate: \$ 35			\$ 351.50



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APPENDIX V - OVERVIEW OF GASB 74 & 75

Before Statements 74 and 75, GASB statement 45 established the reporting standards for Other Postemployment Benefit ("OPEB") plans. It was designed to recognize the Other Postemployment Benefits earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. "pay-as-you-go" accounting. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a "Service Cost". These amounts are reflected in your financial statement each year so that OPEB benefits for an eligible employee shall be fully charged to the financial statement when that eligible employee terminates employment.

In 2012 GASB issued GASB Statements 67 and 68 to update and standardize the financial reporting of pension liabilities. This increased the transparency of pension liabilities by moving them to the balance sheet and made financial statement disclosures of pension liabilities more comparable between municipal entities. GASB Statements 74 and 75 are designed to have the same effect on OPEB plans.

GASB 74 and 75 require retiree medical plans to disclose information about asset and liability levels and show historical contribution information. GASB 74 only applies in situations where a separate trust is established to prefund these benefits. GASB 75 requires employers to perform periodic actuarial valuations to determine annual accounting costs and to keep a running tally of the extent to which these amounts are over or under funded.

GASB 74 and 75 apply to those benefits provided after retirement, except for pension benefits, such as medical, dental and life insurance. The philosophy behind the accounting standard is that these postemployment benefits are part of the compensation earned by employees in return for their services, and the cost of these benefits should be recognized while employees are providing those services, rather than after they have retired. This philosophy has already been applied for years to defined benefit pensions; GASB 74 and 75 extend this practice to all other postemployment benefits.





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APPENDIX V - OVERVIEW OF GASB 74 & 75

The process of determining the liability for OPEB benefits is based on many assumptions about future events. The key actuarial assumptions are:

<u>Turnover and retirement rates</u> – How likely is it that an employee will qualify for postemployment benefits and when will they start?

<u>Medical inflation and claims cost assumptions</u> – When an employee starts receiving postemployment benefits many years from now, how much will be paid each year for the benefits and how rapidly will the costs grow?

Mortality assumption – How long is a retiree likely to receive benefits?

Discount rate assumption – What is the present value of those future benefit payments in terms of today's dollars?

Since the liability is being recognized over the employee's whole career with the Town, the present value is divided into three pieces: the part that is attributed to past years (the "Total OPEB Liability" or "Past Service Liability"), the part that is being earned this year (the "Service Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Service Cost have been calculated, the next step is to determine an actuarially determined contribution. This is an amount that if paid annually would fully prefund the benefits for current active and retired employees. This consists of two pieces:

- ✓ Service Cost because the benefits earned by active employees each year should be paid for each year
- ✓ Past Service Cost a catch-up payment to fund the Accrued Liability over a period of time determined by an actuary

The final step is to keep track going forward of how much of the contribution is actually paid. There is no requirement to actually fund these benefits, but the cumulative deficiency must be disclosed on the Town's financial statements as the Net OPEB Liability (NOL). If you decide to fully fund the NOL this will appear in the financial statement as a Net OPEB Asset. In addition, the Discount Rate used to calculate the liabilities must reflect the expected investment income of whatever funds are set aside to prefund the benefits; if there is no prefunding then the Discount Rate will be much lower and the liabilities significantly higher than if the benefits are prefunded.



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APPENDIX VI – ASOP 41 DISCLOSURES

The Actuarial Standards Board (the "ASB"), vested by the U.S.-based actuarial organizations¹, promulgates actuarial standards of practice ("ASOPs") for use by actuaries when providing professional services in the United States. Each of these organizations requires its members, through its Code of Professional Conduct², to observe the ASOPs of the ASB when practicing in the United States.

The ASOPs are not narrowly prescriptive and neither dictate a single approach nor mandate a particular outcome. ASOPs are intended to provide actuaries with a framework for performing professional assignments and to offer guidance on relevant issues, recommended practices, documentation, and disclosure. Each ASOP articulates a process of analysis, documentation, and disclosure that, in the ASB's judgment, constitutes appropriate practice within the scope and purpose of the ASOP.

ASOP 41 provides guidance to actuaries with respect to actuarial communications and requires certain disclosures which are contained in this Appendix.

Identification of the Responsible Actuary

The responsible actuary is Parker Elmore, ASA, EA, FCA, MAAA of Odyssey Advisors. This actuary is available to provide supplementary information and explanation.

Identification of Actuarial Documents

The date of this document is October 19, 2022 and its subject is the Town of Boxford's GASB 75 OPEB liabilities.



¹The American Academy of Actuaries (the "Academy"), the American Society of Pension Professionals and Actuaries, the Casualty Actuarial Society, the Conference of Consulting Actuaries, and the Society of Actuaries.

² These organizations adopted identical Codes of Professional Conduct effective January 1, 2001



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APPENDIX VI – ASOP 41 DISCLOSURES

Disclosures in Actuarial Reports

- ✓ The contents of this report are intended for the use of the officers, employees, and elected officials of the Town and the Town's appointed auditor. The Town may distribute this report to those parties that have a legal right to require the Town to provide it, in which case it will be provided in its entirety including all assumptions, caveats, and limitations. In addition, we request that the Town notify Odyssey Advisors to whom it was distributed.
- ✓ The purpose of this engagement was to provide the Town with analysis of the GASB 75 OPEB liabilities.
- ✓ The responsible actuary identified above is qualified as specified in the *Qualification Standards* of the American Academy of Actuaries.
- Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.
- Actuarial computations under GASB 75 are for purposes of fulfilling financial accounting requirements of the Town.
 Determinations for purposes other than meeting these financial accounting requirements may be significantly different from the results contained in this report. These communications should not be relied upon for any other purpose.
- The Town of Boxford has agreed to pay Odyssey Advisors a fee for preparing this report. Other than with regard to that contract, we are financially and organizationally independent from the Town and any entity or individual related to the Town. There is nothing in our relationship with the Town that would impair or seem to impair the objectivity of our work.
- The Town provided the employee/retiree data, premium rates and other information used to prepare our report. We have
 reviewed the data for reasonableness but have not audited it. To the extent that there are material inaccuracies in the data, our
 results may be accordingly affected.
- ✓ The date through which data or other information has been considered in developing the findings included in this report is June 30, 2022.
- ✓ The various documents comprising the actuarial report are contained within the document to which these disclosures are attached.





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APPENDIX VI – ASOP 41 DISCLOSURES

Events Subsequent to the Measurement Date

To the best of our knowledge there were no material events subsequent to the Measurement Date that would impact the figures shown in this report.

Actuarial Findings

The actuarial findings of the report can be found in the report to which these disclosures are attached.

Methods, Procedures, Assumptions, and Data

The methods, procedures, assumptions and data used by the actuary can be found in the report to which these disclosures are attached.

Assumptions or Methods Prescribed by Law

While not legally binding, our determinations were made in accordance with our understanding of Statement No. 75 of the Governmental Accounting Standards Board. Actuarial computations under GASB 75 are for purposes of fulfilling employer accounting requirements. Determinations for purposes other than meeting such requirements may be significantly different from these results. Accordingly, additional determinations may be needed for other purposes.

Responsibility for Assumptions and Methods

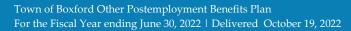
The actuary does not disclaim responsibility for any material assumption(s) or method(s).

Deviation from the Guidance of an ASOP

The actuary has not deviated materially from the guidance set forth in an applicable ASOP.

Rounding

Results in this report are shown to the nearest dollar. Due to the predictive nature of these results, no implication is made as to the degree of precision in these unrounded figures. Clients should work with their auditors to decide if it would be prudent to round these results when applying them to the financial statements.







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GLOSSARY

<u>Accrual Accounting</u> – A system of accounting in which revenues are recorded when earned and outlays are recorded when goods are received or services performed, even though the actual receipt of revenues and payment for goods or services may occur, in whole or in part, at a different time.

<u>Actuarially Determined Contribution</u> – Amount of funding required annually to fully fund plan benefits. Determined by the actuary using a consistent methodology.

<u>Amortization</u> – Allows the recognition of liability over a fixed period of time.

<u>Cash Basis Accounting</u> – A system of accounting in which revenues are recorded when received and outlays are recorded when payment is made.

<u>Deferred Inflows/Outflows of Resources</u> – Amounts arising from experience gains and losses that have not been recognized into the OPEB Expense but will be recognized in the future.

<u>Discount Rate</u> – The interest rate used to calculate the present value of future cash flows. Under GASB 75, the rate should be the expected long-term rate of return on investments for a plan that is being fully funded, the 20-year municipal bond index for a pay-as-you-go plan, and a blend of the two rates for a plan that is being partially funded.

<u>Entry Age Normal</u> – Under this method, the annual service cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement. The annual service cost for each active member is a level percent of payroll. The total OPEB liability is the actuarial present value of the projected benefit times the ratio of past service to expected total service at retirement/termination.

<u>Fiduciary Net Position</u> – The value of cash, investments, other assets and property belonging to an OPEB trust.





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<u>GLOSSARY</u>

<u>Government Accounting Standards Board (GASB)</u> – "The Governmental Accounting Standards Board (GASB) was organized in 1984 by the Financial Accounting Foundation (FAF) to establish standards of financial accounting and reporting for state and local governmental entities. Its standards guide the preparation of external financial reports of those entities."

<u>Implicit Subsidy</u> – The liability that arises because retirees who are not eligible for Medicare are charged the same premium as active employees even though their actual medical costs are higher on average.

<u>Irrevocable Contribution</u> – The transfer of assets to a qualified trust in which assets may only be withdrawn for the purpose of providing retiree other postemployment benefits.

<u>Net OPEB Liability (NOL)</u> – Total OPEB Liability less the Fiduciary Net Position.

<u>Other Postemployment Benefits (OPEB)</u> – Benefits that an employee will begin to receive at the start of retirement. This does not include pension benefits paid to the retired employee.

<u>OPEB Trust</u> – An entity which holds assets for the sole purpose of funding OPEB. All contributions and earning within this entity must be irrevocable and protected from creditors.

<u>Pay-as-you-go funding</u> – Paying benefits (such as pensions or OPEB) on a cash basis, with no money set aside for future liabilities which are already incurred.

<u>Service Cost</u> – The actuarially determined present value contribution needed to fund benefits which are earned for employee service rendered during the current year. Service cost depends on many factors, including the interest rate used to discount future cashflows, and expected inflation.

<u>Total OPEB Liability (TOL)</u> – That portion, as determined by the Individual Entry Age Normal Actuarial Cost Method, of the Actuarial Present Value of benefits and expenses which are not provided for by future Service Costs.

