

Town of Salisbury Other Postemployment Benefits Plan

GASB 74 & GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2019

As of the Measurement Date:
June 30, 2020

For the Reporting Date:
June 30, 2020

Delivered December 4, 2020



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December 4, 2020

Personal and Confidential

Ms. Karen Snow
Finance Director
Town of Salisbury
5 Beach Road
Salisbury, MA 01952

Dear Ms. Snow:

We have performed an actuarial valuation of the Town of Salisbury Other Postemployment Benefits Plan for the Reporting Date & fiscal year ending June 30, 2020 with a Measurement Date of June 30, 2020 and a Valuation Date of July 1, 2019. The figures presented in this report reflect the adoption, by the Town of Salisbury, of Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75") effective for the fiscal years ending June 30, 2017 and June 30, 2018 respectively.

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,

A handwritten signature in black ink, appearing to read 'P. Elmore', written over a light blue horizontal line.

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

December 4, 2020

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Salisbury other postemployment benefit programs with a Valuation Date of July 1, 2019 with a Measurement Date of June 30, 2020 for the Reporting Date & fiscal year ending June 30, 2020 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.

A handwritten signature in black ink, appearing to read 'P. Elmore', with a long horizontal flourish extending to the right.

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

EXECUTIVE SUMMARY

How did plan liabilities change from FY 19 to FY 20?

Plan Experience

For the year ending on the Measurement Date of June 30, 2020, the Plan saw an experience loss of \$592,860 or 8.86% of the beginning Total OPEB Liability ("TOL"). This was mainly due to the identification of one (1) retiree who is over age 65 and is enrolled in an Active plan as well as two (2) active employees that are never expected to be eligible for Medicare. This was somewhat offset by the premium for Tufts Medicare Preferred increasing by 2% vs. the expected 10% increase as well as a decrease in the number of retirees and spouses with medical coverage.

Assumption Changes

Some key assumptions have changed since the prior valuation - their impact is detailed below.

- ✓ Due to the GASB 75 standards the discount rate has been changed from 7.50% to 4.75% increasing the disclosed liability by \$3.2 million.
- ✓ The percentage of employees assumed to elect coverage in retirement has been updated decreasing the disclosed liability by \$810 thousand.
- ✓ Assumption changes caused Service Cost to increase by \$110 thousand.

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 there was an investment loss of \$11,442 due to asset performance below the expected rate of return.

Changes in Benefits 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.

EXECUTIVE SUMMARY

Recognition Period

- ✓ Changes in assumptions & plan experience are amortized into the net OPEB expense over 6.45 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.

Discount Rate Determinants

- ✓ Employer Current and Future Benefit Payments
- ✓ Municipal Bond Rate – The municipal bond rate was 2.66% as of June 30, 2020.
- ✓ Current Asset Level – The Town had \$330,160 of OPEB assets as of June 30, 2020.
- ✓ Funding Policy - The Town is expected to contribute \$50K annually.
- ✓ Investment Policy - The Town is expected to earn 6.65% on assets based on its investment policy.

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare supplement) plans - represent 64.96% 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 at 4.50% per year for Active plans and 4.50% per year for Medicare supplement plans.
- ✓ Discount Rate (4.75%) – 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

EXECUTIVE SUMMARY

Medicare Buy-In

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 retiree is expected to incur. Under Actuarial Standards of Practice for OPEB, we are required to reflect the projected higher healthcare costs that occur as retirees age. The Town currently has one retiree who is over the age of 65 and is enrolled in an Active medical plan rather than a Medicare Supplement (Senior) plan. You may wish to review the retiree's Medicare eligibility to see if the retiree is 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.

I. Number of Retirees and Spouses Over 65 in Active Plans	1
II. Current Liability for Retirees and Spouses Over 65 in Active Plans	544,000
III. Potential Liability in Medicare Supplement Plan*	113,000
IV. Potential Reduction in Liability [II. - III.]	431,000

***Does not include Medicare Part A or B penalties nor Medicare Part B Premiums**

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, 2019	July 1, 2018
Measurement Date & Period Ending	June 30, 2020	June 30, 2019
Reporting Date/Fiscal Year End	June 30, 2020	June 30, 2019
Total OPEB Liability	10,185,913	6,690,039
Per Eligible Active Plan Participant	69,096	N/A
Per Retiree/Spouse Plan Participant	65,400	N/A
Total Annual Service Cost (Annual Benefit Accrual)	265,435	165,480
Per Eligible Active Plan Participant	3,160	1,947
Expected Employer Share of Retiree Costs	293,204	319,888
Per Retiree/Spouse Plan Participant	4,376	4,382
Net OPEB Liability as a % of Covered Payroll	158.50%	109.60%

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.

For the Period Ending on the Measurement Date of:	Number of Retirees, Spouses, & Surviving Spouses	Total OPEB Liability	Present Value at 3.00% of Total OPEB Liability	Employer Share of Premiums/Claims Including "Implicit Cost"	Present Value at 3.00% of Employer Share of Premiums / Claims Including "Implicit Cost"
June 30, 2020	67	10,185,913	10,185,913	293,204	293,204
June 30, 2025	77	12,367,431	10,668,255	402,556	347,248
June 30, 2030	84	14,762,470	10,984,664	569,923	424,076
June 30, 2035	87	17,266,557	11,082,746	688,724	442,066
June 30, 2040	86	19,851,924	10,991,529	836,124	462,942
June 30, 2045	84	22,649,108	10,817,340	1,039,492	496,467
June 30, 2050	82	25,765,673	10,615,116	1,178,508	485,530

PRINCIPAL RESULTS OF THE VALUATION

Town of Salisbury Assuming Funding - 4.75% discount rate Comparison of Plan Liabilities to Prior Valuation

Valuation Date	July 1, 2019	July 1, 2018
For the Measurement Period ending on the Measurement Date of:	June 30, 2020	June 30, 2019
For the Reporting Period & Fiscal Year ending on:	June 30, 2020	June 30, 2019
I. Total OPEB Liability		
A. Actives	5,804,103	N/A
B. Retirees/Disabled	<u>4,381,810</u>	<u>N/A</u>
C. Total	10,185,913	6,690,039
II. Fiduciary Net Position [Plan Assets]	330,160	271,886
III. Net OPEB Liability (Asset) [I. - II.]	9,855,753	6,418,153
IV. Funded Ratio [II. / I.]	3.24%	4.06%
V. Number of Eligible Participants		
A. Actives	84	85
B. Retirees/Disabled & Dependents	<u>67</u>	<u>73</u>
C. Total	151	158
VI. Service Cost	265,435	165,480
VII. Financial Statement Expense	663,191	63,212
VIII. Employer Contribution to the OPEB Trust	(50,000)	(50,000)
IX. Deferred Inflow of Resources	(2,094,379)	(2,746,834)
X. Deferred Outflow of Resources	2,837,919	372,761
XI. Money Weighted Rate of Return	3.04%	5.48%
XII. 20-year Municipal Bond Rate (SAPIHG)	2.66%	2.79%
XIII. Expected Long Term Rate of Return (Net of Expense)	6.65%	7.50%
XIV. Crossover Year	Immediate	N/A
XV. Discount Rate	4.75%	7.50%

PRINCIPAL RESULTS OF THE VALUATION

Town of Salisbury Plan Liabilities as of the June 30, 2020 Measurement Date

	Town Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Public Works Employees and Retirees	Sewer Enterprise Employees and Retirees	Total
I. Total OPEB Liability						
A. Actives	1,049,230	1,555,909	2,284,073	642,646	272,245	5,804,103
B. Retirees/Disabled	<u>515,093</u>	<u>2,579,325</u>	<u>953,846</u>	<u>284,635</u>	<u>48,911</u>	<u>4,381,810</u>
C. Total	1,564,323	4,135,234	3,237,919	927,281	321,156	10,185,913
II. Fiduciary Net Position [Plan Assets]	34,511	91,228	71,433	20,457	112,531	330,160
III. Net OPEB Liability (Asset) [I. - II.]	1,529,812	4,044,006	3,166,486	906,824	208,625	9,855,753
IV. Number of Eligible Participants						
A. Actives	26	26	20	8	4	84
B. Retirees/Disabled	<u>14</u>	<u>34</u>	<u>11</u>	<u>2</u>	<u>1</u>	<u>62</u>
C. Total	40	60	31	15	5	151
For the Reporting Date and Fiscal Year Ending June 30, 2020						
V. Service Cost	61,227	103,864	71,843	18,763	9,738	265,435
VI. Financial Statement Expense	124,344	266,746	200,027	55,222	16,852	663,191
VII. Employer Share of Costs	(41,790)	(146,987)	(74,529)	(27,076)	(2,822)	(293,204)
VIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(7,801)	(20,125)	(15,933)	(4,522)	(1,619)	(50,000)
IX. Total Employer Contribution [VII. + VIII.]	(49,591)	(167,112)	(90,462)	(31,598)	(4,441)	(343,204)

PRINCIPAL RESULTS OF THE VALUATION

Town of Salisbury
Assuming Funding - 4.75% discount rate
For the Period Ending on the June 30, 2020 Measurement Date

	Actives			Retirees/Disabled			Grand Total
	Under Age 65	Age 65+	Actives Total	Under Age 65	Age 65 +	Retirees Total	
Present Value of Future Benefits							
A. Participants	2,217,292	2,963,950	5,181,242	671,249	2,557,455	3,228,704	8,409,946
B. Spouses	<u>1,620,956</u>	<u>1,764,424</u>	<u>3,385,380</u>	<u>346,199</u>	<u>806,907</u>	<u>1,153,106</u>	<u>4,538,486</u>
C. Total	3,838,248	4,728,374	8,566,622	1,017,448	3,364,362	4,381,810	12,948,432
Total OPEB Liability							
A. Participants	1,477,369	2,108,256	3,585,625	671,249	2,557,455	3,228,704	6,814,329
B. Spouses	<u>1,074,825</u>	<u>1,143,653</u>	<u>2,218,478</u>	<u>346,199</u>	<u>806,907</u>	<u>1,153,106</u>	<u>3,371,584</u>
C. Total	2,552,194	3,251,909	5,804,103	1,017,448	3,364,362	4,381,810	10,185,913
Service Cost							
A. Participants	66,734	87,555	154,289	0	0	0	154,289
B. Spouses	<u>49,481</u>	<u>61,665</u>	<u>111,146</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>111,146</u>
C. Total	116,215	149,220	265,435	0	0	0	265,435

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2020 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. OPEB Expense Development

Components of the Town's OPEB Expenses for the Fiscal Year Ending June 30, 2020	
Description	Amount
I. Service Cost	265,435
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	510,864
III. Deferred (Inflows)/Outflows from Plan Experience*	177,529
IV. Deferred (Inflows)/Outflows from Changes of Assumptions*	(277,274)
V. Projected Earnings on OPEB Plan Investments	(19,716)
VI. Deferred (Inflows)/Outflows from Earnings on Plan Investments**	6,353
VII. Financial Statement Expense Prior to Plan Design Changes [I. + II. + III. + IV. + V. + VI.]	663,191
VIII. Expense Related to Change in Benefit Terms***	0
IX. Financial Statement Expense [VII. + VIII.]	663,191

* Amortized over 6.45 years

** Amortized over 5.00 years

*** Recognized Immediately

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2020 Measurement Date)

2. Changes in Net OPEB Liability

Changes in Net OPEB Liability			
		Increase (Decrease)	
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
I. Balances for June 30, 2019	6,690,039	271,886	6,418,153
II. Prior Period Adjustment	0	0	0
III. Balances for June 30, 2019 with Adjustment [I. + II.]	6,690,039	271,886	6,418,153
Changes for the year:			
IV. Service Cost	265,435	0	265,435
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	510,864	0	510,864
VI. Changes in Benefit Terms *	0	0	0
VII. Change in Assumptions **	2,419,919	0	2,419,919
VIII. Differences Between Actual and Expected Experience **	592,860	0	592,860
IX. Net Investment Income	0	8,274	(8,274)
X. Employer Contributions to Trust	0	343,204	(343,204)
XI. Benefit Payments Withdrawn from Trust	0	(293,204)	293,204
XII. Benefit Payments Excluding Implicit Cost	(225,280)	0	(225,280)
XIII. Implicit Cost Amount	(67,924)	0	(67,924)
XIV. Total Benefit Payments Including Implicit Cost [XII. + XIII.]	(293,204)	0	(293,204)
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.]	3,495,874	58,274	3,437,600
XVIII. Balances at June 30, 2020 [III.+XVII.]	10,185,913	330,160	9,855,753

* Recognized Immediately

** Amortized over 6.45 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

3. Changes in Net OPEB Expense

Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Differences Between Expected & Actual Experience									
Fiscal	Differences Between Actual & Expected Experience	Recognition Period (Years)	Remaining Balance	2020	2021	2022	2023	2024	2025
2017									
2018	531,654	6.12	274,815	85,613	85,613	85,613	85,613	17,976	
2019	0	6.12	0	0	0	0	0	0	0
2020	592,860	6.45	500,944	91,916	91,916	91,916	91,916	91,916	91,916
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			775,759						
Net increase (decrease) in OPEB Expense				177,529	177,529	177,529	177,529	109,892	91,916

Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Changes in Assumptions									
Fiscal	Differences from Changes in Actuarial Assumptions	Recognition Period (years)	Remaining Balance	2020	2021	2022	2023	2024	2025
2017									
2018	(4,051,744)	6.12	(2,094,379)	(652,455)	(652,455)	(652,455)	(652,455)	(137,014)	
2019	0	6.12	0	0	0	0	0	0	0
2020	2,419,919	6.45	2,044,738	375,181	375,181	375,181	375,181	375,181	375,181
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			(49,641)						
Net increase (decrease) in OPEB Expense				(277,274)	(277,274)	(277,274)	(277,274)	238,167	375,181

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

3. Changes in Net OPEB Expense (Continued)

Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of Differences Between Projected & Actual Earnings on OPEB Plan Investments									
Fiscal	Differences Between Actual & Expected Earnings	Recognition Period (years)	Remaining Balance	2020	2021	2022	2023	2024	2025
2017	5,117	5.00	1,025	1,023	1,025				
2018	9,398	5.00	3,758	1,880	1,880	1,878			
2019	5,809	5.00	3,485	1,162	1,162	1,162	1,161		
2020	11,442	5.00	9,154	2,288	2,288	2,288	2,288	2,290	
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			17,422						
Net increase (decrease) in OPEB Expense				6,353	6,355	5,328	3,449	2,290	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 Measurement Date)

3. Changes in Net OPEB Expense (Continued)

Statement of Outflows & Inflows Arising from Current & Prior Reporting Periods for the Measurement Period Ending on June 30, 2020 to be Reported for the Fiscal Year Ending June 30, 2020			
	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	775,759	0	775,759
III. Changes of Assumptions	2,044,738	(2,094,379)	(49,641)
IV. Net Difference Between Projected & Actual Earnings on OPEB Plan Investments	<u>17,422</u>	<u>0</u>	<u>17,422</u>
V. Total [I.+II.+III.+IV.]	2,837,919	(2,094,379)	743,540

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

3. Changes in Net OPEB Expense (Continued)

Annual Amortization of Deferred (Inflows)/Outflows

The balance of deferred (inflows)/outflows as of June 30, 2020 will be recognized in future years as shown below.

Year ending June 30:

2021	(93,390)
2022	(94,417)
2023	(96,296)
2024	350,349
2025	467,097
Thereafter	210,197

4. Discount Rate

The discount rate used to measure the Total OPEB liability was 4.75% as of June 30, 2020 and 7.50% as of June 30, 2019. 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 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 2.66% as of June 30, 2020. The S&P Municipal Bond 20 - Year High Grade Index is the index rate for 20 year, tax exempt general obligation municipal bonds with an average rate of AA/Aa or higher.

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 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, 2020 Measurement Date, total Town premiums plus implicit costs for the retiree medical program were \$293,204. The Town also contributed \$50,000 to an OPEB Trust for a total contribution during the measurement period of \$343,204 to be reported on the financial statement for the fiscal year ending June 30, 2020.

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 & Expected Long-Term Real Rate of Return			
Asset Class	Target Allocation	Asset Class	Long-Term Expected Real Rate of Return*
Domestic Equity - Large Cap	21.25%	Domestic Equity - Large Cap	4.80%
Domestic Equity - Small/Mid Cap	19.25%	Domestic Equity - Small/Mid Cap	5.29%
International Equity - Developed Market	12.50%	International Equity - Developed Market	5.45%
International Equity-Emerging Market	8.00%	International Equity-Emerging Market	6.42%
Domestic Fixed Income	27.00%	Domestic Fixed Income	2.05%
International Fixed Income	3.75%	International Fixed Income	3.00%
Alternatives	7.75%	Alternatives	6.50%
Real Estate	0.00%	Real Estate	6.25%
Cash & Cash Equivalents	0.50%	Cash & Cash Equivalents	0.00%
Total	100.00%		
		I. Real Rate of Return**	4.40%
		II. Inflation Assumption	2.50%
		III. Total Nominal Return [I. + II.]	6.90%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	6.65%

* Based on 2019 Horizon Survey of Capital Market Assumptions

** Geometric Mean

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 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, 2020	860,162	(343,204)	516,958	6,217,612	5.52%
June 30, 2019	643,587	(369,888)	273,699	5,853,673	6.32%
June 30, 2018	712,043	(356,113)	355,930	5,655,723	6.30%
June 30, 2017	694,556	(259,604)	434,952	4,497,990	5.77%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

8. Effect of 1% Change in Healthcare Trend

<u>Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2020 Measurement Date</u>			
	<u>1% Decrease</u>	<u>Current Trend Rate</u>	<u>1% Increase</u>
I. Total OPEB Liability	8,663,609	10,185,913	12,141,458
II. Fiduciary Net Position	<u>330,160</u>	<u>330,160</u>	<u>330,160</u>
III. Net OPEB Liability (Asset) [I.-II.]	8,333,449	9,855,753	11,811,298
IV. Service Cost	205,106	265,435	349,040

9. Effect of 1% Change in Discount Rates

<u>Impact of a 1% Change in the Discount Rate as of the June 30, 2020 Measurement Date</u>			
	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
I. Total OPEB Liability	11,893,216	10,185,913	8,823,715
II. Fiduciary Net Position	<u>330,160</u>	<u>330,160</u>	<u>330,160</u>
III. Net OPEB Liability (Asset) [I.-II.]	11,563,056	9,855,753	8,493,555
IV. Service Cost	351,181	265,435	202,846

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

10. Money Weighted Rate of Return

	Plan Investments / Net External Cash Flows	Periods Invested	Period Weight
I. Beginning value - June 30, 2019	271,886	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	0	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
<u>June</u>	<u>50,000</u>	0	0.0000
II. Total net external cash flow	50,000		
III. Earnings and increase in fair value	8,274		
IV. Ending value - June 30, 2020 [I.+II.+III.]	330,160		
Money Weighted Rate of Return	3.04%		
Asset Value - June 30, 2020	330,160		

EXHIBIT A
FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 Measurement Date)

11. OPEB Liability, OPEB Expense

	Fiscal Year Ending June 30, 2020					
	Town Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Public Works Employees and Retirees	Sewer Enterprise Employees and Retirees	Total
I. Total OPEB Liability as of June 30, 2020	1,564,323	4,135,234	3,237,919	927,281	321,156	10,185,913
II. Fiduciary Net Position as of June 30, 2020	34,511	91,228	71,433	20,457	112,531	330,160
III. Net OPEB Liability (Asset) as of June 30, 2020 [I. - II.]	1,529,812	4,044,006	3,166,486	906,824	208,625	9,855,753
IV. Service Cost	61,227	103,864	71,843	18,763	9,738	265,435
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	79,591	206,417	162,278	46,221	16,357	510,864
VI. Projected Earnings on OPEB Plan Investments	(2,132)	(5,620)	(4,406)	(1,260)	(6,298)	(19,716)
VII. Net Recognition of Deferred (Inflows)/Outflows	(14,342)	(37,915)	(29,688)	(8,502)	(2,945)	(93,392)
VIII. Expense Related to Change in Benefit Terms	0	0	0	0	0	0
IX. Financial Statement Expense [IV. + V. + VII. + VIII.]	124,344	266,746	200,027	55,222	16,852	663,191
X. Employer Share of Costs	(41,790)	(146,987)	(74,529)	(27,076)	(2,822)	(293,204)
XI. Employer (Payments) Withdrawals to/from OPEB Trust	(7,801)	(20,125)	(15,933)	(4,522)	(1,619)	(50,000)
XII. Total Employer Contribution [X. + XI.]	(49,591)	(167,112)	(90,462)	(31,598)	(4,441)	(343,204)
XIII. Net OPEB Expense [IX. + XII.]	74,753	99,634	109,565	23,624	12,411	319,987

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

12. OPEB Liability, OPEB Expense and Deferred Inflow/Outflow

Valuation Date	July 1, 2019
For the Measurement Period ending on the Measurement Date of:	June 30, 2020
For the Reporting Period & Fiscal Year ending on:	June 30, 2020
Source of Deferred Inflow/Outflow	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	775,759
II. Deferred (Inflow)/Outflow from Investment Experience	17,422
III. Deferred (Inflow)/Outflow from Changes in Assumptions	(49,641)
Change in Deferred Inflow/Outflow	
I. Deferred Outflow at the beginning of the period	372,761
II. Deferred Outflow created during the period	3,024,221
III. Deferred Outflow recognized during the period	559,063
IV. Change in Deferred Outflow (II. - III.)	2,465,158
V. Deferred Outflow at end of the period (I. + IV.)	2,837,919
VI. Deferred Inflow at the beginning of the period	(2,746,834)
VII. Deferred Inflow created during the period	0
VIII. Deferred Inflow recognized during the period	(652,455)
IX. Change in Deferred Inflow (VII. - VIII.)	652,455
X. Deferred Inflow at end of the period (VI. + IX.)	(2,094,379)
Net OPEB Liability	
I. Net OPEB Liability at beginning of period	6,418,153
II. Service Cost	265,435
III. Interest on Total OPEB Liability, Service Cost, and Payments	510,864
IV. Projected Investment Income	(19,716)
V. Total Employer Contributions	(343,204)
VI. Expense Related to Change in Benefit Terms	0
VII. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V. + VI.)	413,379
VIII. Deferred Outflow created during the period	3,024,221
IX. Deferred Inflow created during the period	0
X. Net OPEB Liability at end of period (I. + VII. + VIII. + IX.)	9,855,753
Net OPEB Expense	
I. Service Cost	265,435
II. Interest on Total OPEB Liability, Service Cost, and Payments	510,864
III. Projected Investment Income	(19,716)
IV. Recognition of Deferred (Inflow)/Outflow	(93,392)
V. Expense Related to Change in Benefit Terms	0
VI. Financial Statement Expense (I. + II. + III. + IV. + V.)	663,191
VII. Benefit Payments	(293,204)
VIII. Contributions to Trust	(50,000)
IX. Total Employer Payments (VII. + VIII.)	(343,204)
X. Total Net OPEB Expense under GASB 75 (VI. + IX.)	319,987

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 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. We have used a 30 year flat dollar amortization 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)				
	<u>June 30, 2020</u>	<u>June 30, 2019</u>	For the Fiscal Year Ending:	
			<u>June 30, 2018</u>	<u>June 30, 2017</u>
I. Service Cost	265,435	165,480	325,851	325,851
II. Amortization of NOL	<u>594,727</u>	<u>478,107</u>	<u>386,192</u>	<u>368,705</u>
III. Actuarial Determined Contribution [I. + II.]	860,162	643,587	712,043	694,556
IV. Contributions in Relation to the Actuarially Determined Contribution	<u>(343,204)</u>	<u>(369,888)</u>	<u>(356,113)</u>	<u>(259,604)</u>
V. Contribution Deficiency / (Excess) [III. + IV.]	<u>516,958</u>	<u>273,699</u>	<u>355,930</u>	<u>434,952</u>
Covered Employee Payroll	6,217,612	5,853,673	5,655,723	4,497,990
Contributions as a % of Covered Employee Payroll	5.52%	6.32%	6.30%	5.77%
Discount Rate	4.75%	7.50%	7.50%	4.00%
Money Weighted Rate of Return	3.04%	5.48%	(1.16%)	0.25%

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Schedule of Changes in the Town's Net OPEB Liability and Related Ratios				
Valuation Date For the Reporting Period & Fiscal Year Ending on:	July 1, 2019 June 30, 2020	July 1, 2018 June 30, 2019	July 1, 2018 June 30, 2018	July 1, 2016 June 30, 2017
Total OPEB Liability	10,185,913	6,690,038	6,366,339	9,480,499
I. Service Cost	265,435	165,480	325,851	325,851
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	510,864	478,107	386,192	368,705
III. Changes in Benefit Terms	0	0	0	0
IV. Difference Between Expected & Actual Plan Experience	592,861	0	531,654	0
V. Changes of Assumptions	2,419,919	0	(4,051,744)	0
VI. Benefit Payments Excluding Implicit Cost	(225,280)	N/A	N/A	N/A
VII. Implicit Cost Amount	(67,924)	N/A	N/A	N/A
VIII. Total Benefit Payments Including Implicit Cost [VI.+VII.]	(293,204)	(319,888)	(306,113)	(209,604)
IX. Net Change in OPEB Liability [I.+II.+III.+IV.+V.+VIII.]	3,495,875	323,699	(3,114,160)	484,952
X. Total OPEB Liability - Beginning of Period	6,690,038	6,366,339	9,480,499	8,995,547
XI. Prior Period Adjustment	0	0	0	0
XII. Total OPEB Liability - Beginning of Period with Adjustment	6,690,038	6,366,339	9,480,499	8,995,547
XIII. Total OPEB Liability - End of Period [IX.+XII.]	10,185,913	6,690,038	6,366,339	9,480,499
Plan Fiduciary Net Position	330,160	271,886	210,097	162,024
XIV. Earning from Plan Investments	8,274	11,789	(1,927)	341
XV. Employer Contribution to Trust	343,204	369,888	356,113	259,604
XVI. Benefit Payments from Trust, Including Refunds of Member Contributions	(293,204)	(319,888)	(306,113)	(209,604)
XVII. Administrative Expense	0	0	0	0
XVIII. Other	0	0	0	0
XIX. Net Change in Plan Fiduciary Net Position [XIV.+XV.+XVI.+XVII.+XVIII.]	58,274	61,789	48,073	50,341
XX. Plan Fiduciary Net Position - Beginning of Period	271,886	210,097	162,024	111,683
XXI. Prior Period Adjustment	0	0	0	0
XXII. Plan Fiduciary Net Position - Beginning of Period with Adjustment	271,886	210,097	162,024	111,683
XXIII. Plan Fiduciary Net Position - End of Period [XIX.+XXII.]	330,160	271,886	210,097	162,024
XXIV. Net OPEB Liability [XIII.-XXIII.]	9,855,753	6,418,152	6,156,242	9,318,475
XXV. Plan Fiduciary Net Position as % of Total OPEB Liability [XXIII. / XIII.]	3.24%	4.06%	3.30%	1.71%
XXVI. Covered Employee Payroll	6,217,612	5,853,673	5,655,723	4,497,990
XXVII. Plan NOL as % of Covered Employee Payroll [XXIV. / XXVI.]	158.51%	109.64%	108.85%	207.17%
Single Discount Rate to calculate Plan Liabilities	4.75%	7.50%	7.50%	4.00%

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of July 1, 2019.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, June 30, 2020.

Actuarial Assumptions:

Investment Rate of Return:	6.65%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate	2.66% as of June 30, 2020 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
Single Equivalent Discount Rate:	4.75%, net of OPEB plan investment expense, including inflation.
Inflation:	2.50% as of June 30, 2020 and for future periods
Salary Increases:	3.00% annually as of June 30, 2020 and for future periods
Cost of Living Adjustment:	Not Applicable

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 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

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Plan Membership

At July 1, 2019, OPEB plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits:	67
Active Employees:	<u>84</u>
Total:	151

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, 2019 to June 30, 2020

- ✓ Due to the GASB 75 standards the discount rate has been changed from 7.50% to 4.75%
- ✓ The percentage of employees assumed to elect coverage in retirement has been updated

Contributions/Withdrawals:

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town contributed beyond the pay-as-you-go cost \$50,000 for the period ending on the June 30, 2020 Measurement Date. For the year ending on the June 30, 2020 Measurement Date total Town premiums plus implicit costs for the retiree medical program were \$293,204. \$67,924 of the \$293,204 represents implicit cost.

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 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.

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CURRENT FUNDING POLICY (OPEN GROUP)

Funding - 4.75% 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 6.65% 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)	VII. Trust Contributions Beyond Pay-as-you-go	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.]
2020	June 30, 2020	10,185,913	330,160	9,855,753	3.24%	265,435	293,204	50,000	343,204	293,204	0	50,000
2021	June 30, 2021	10,613,171	403,751	10,209,420	3.80%	272,883	334,564	50,000	384,564	334,564	0	50,000
2022	June 30, 2022	11,015,910	482,236	10,533,674	4.38%	280,996	370,270	50,000	420,270	370,270	0	50,000
2023	June 30, 2023	11,437,731	565,940	10,871,791	4.95%	291,800	388,304	50,000	438,304	388,304	0	50,000
2024	June 30, 2024	11,897,507	655,211	11,242,296	5.51%	301,357	381,729	50,000	431,729	381,729	0	50,000
2025	June 30, 2025	12,367,431	750,418	11,617,013	6.07%	311,662	402,556	50,000	452,556	402,556	0	50,000
2026	June 30, 2026	12,855,461	851,957	12,003,504	6.63%	322,461	417,958	50,000	467,958	417,958	0	50,000
2027	June 30, 2027	13,348,371	960,248	12,388,123	7.19%	334,225	446,718	50,000	496,718	446,718	0	50,000
2028	June 30, 2028	13,831,686	1,075,740	12,755,946	7.78%	345,208	488,221	50,000	538,221	488,221	0	50,000
2029	June 30, 2029	14,294,826	1,198,912	13,095,914	8.39%	357,896	540,544	50,000	590,544	540,544	0	50,000
2030	June 30, 2030	14,762,470	1,330,275	13,432,195	9.01%	371,186	569,923	50,000	619,923	569,923	0	50,000
2031	June 30, 2031	15,258,639	1,470,374	13,788,265	9.64%	384,072	577,155	50,000	627,155	577,155	0	50,000
2032	June 30, 2032	15,737,614	1,619,790	14,117,824	10.29%	397,760	628,265	50,000	678,265	628,265	0	50,000
2033	June 30, 2033	16,252,309	1,779,142	14,473,167	10.95%	411,449	630,174	50,000	680,174	630,174	0	50,000
2034	June 30, 2034	16,780,181	1,949,091	14,831,090	11.62%	427,592	647,277	50,000	697,277	647,277	0	50,000
2035	June 30, 2035	17,266,557	2,130,341	15,136,216	12.34%	441,912	688,724	50,000	738,724	688,724	0	50,000
2036	June 30, 2036	17,739,911	2,323,644	15,416,267	13.10%	458,333	740,397	50,000	790,397	740,397	0	50,000
2037	June 30, 2037	18,232,617	2,529,802	15,702,815	13.88%	475,017	739,669	50,000	789,669	739,669	0	50,000
2038	June 30, 2038	18,739,735	2,749,670	15,990,065	14.67%	491,489	789,450	50,000	839,450	789,450	0	50,000
2039	June 30, 2039	19,265,258	2,984,159	16,281,099	15.49%	509,472	848,414	50,000	898,414	848,414	0	50,000
2040	June 30, 2040	19,851,924	3,234,241	16,617,683	16.29%	530,644	836,124	50,000	886,124	836,124	0	50,000
2041	June 30, 2041	20,307,774	3,500,954	16,806,820	17.24%	549,834	880,830	50,000	930,830	880,830	0	50,000
2042	June 30, 2042	20,883,538	3,785,403	17,098,135	18.13%	567,236	927,688	50,000	977,688	927,688	0	50,000
2043	June 30, 2043	21,486,350	4,088,768	17,397,582	19.03%	591,339	961,177	50,000	1,011,177	961,177	0	50,000
2044	June 30, 2044	22,104,621	4,412,307	17,692,314	19.96%	615,279	987,219	50,000	1,037,219	987,219	0	50,000
2045	June 30, 2045	22,649,108	4,757,361	17,891,747	21.00%	640,774	1,039,492	50,000	1,089,492	1,039,492	0	50,000
2046	June 30, 2046	23,235,533	5,125,361	18,110,172	22.06%	666,953	1,060,962	50,000	1,110,962	1,060,962	0	50,000
2047	June 30, 2047	23,781,054	5,517,833	18,263,221	23.20%	694,316	1,076,009	50,000	1,126,009	1,076,009	0	50,000
2048	June 30, 2048	24,343,865	5,936,405	18,407,460	24.39%	723,514	1,106,907	50,000	1,156,907	1,106,907	0	50,000
2049	June 30, 2049	25,075,833	6,382,812	18,693,021	25.45%	754,229	1,142,628	50,000	1,192,628	1,142,628	0	50,000
2050	June 30, 2050	25,765,673	6,858,905	18,906,768	26.62%	789,532	1,178,508	50,000	1,228,508	1,178,508	0	50,000
2051	June 30, 2051	26,511,912	7,366,658	19,145,254	27.79%	821,997	1,192,878	50,000	1,242,878	1,192,878	0	50,000

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES

Table 1: Projection of Contributions using a July 1, 2019 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, 2020	6,217,612	0	6,217,612	0	293,204	0	293,204
June 30, 2021	5,903,978	500,162	6,404,140	0	334,564	0	334,564
June 30, 2022	5,588,360	1,007,904	6,596,264	0	370,270	0	370,270
June 30, 2023	5,373,519	1,420,633	6,794,152	0	388,304	0	388,304
June 30, 2024	5,181,654	1,816,323	6,997,977	0	381,729	0	381,729
June 30, 2025	4,996,029	2,211,887	7,207,916	0	402,556	0	402,556
June 30, 2026	4,802,394	2,621,759	7,424,153	0	417,958	0	417,958
June 30, 2027	4,618,427	3,028,451	7,646,878	0	446,718	0	446,718
June 30, 2028	4,407,642	3,468,642	7,876,284	0	488,221	0	488,221
June 30, 2029	4,199,427	3,913,146	8,112,573	0	540,544	0	540,544
June 30, 2030	4,016,148	4,339,802	8,355,950	0	569,923	0	569,923
June 30, 2031	3,839,124	4,767,505	8,606,629	0	575,296	1,859	577,155
June 30, 2032	3,667,621	5,197,207	8,864,828	0	623,526	4,739	628,265
June 30, 2033	3,494,764	5,636,009	9,130,773	0	621,222	8,952	630,174
June 30, 2034	3,367,851	6,036,845	9,404,696	0	632,524	14,753	647,277
June 30, 2035	3,203,395	6,483,442	9,686,837	0	666,615	22,109	688,724
June 30, 2036	3,056,452	6,920,990	9,977,442	0	712,431	27,966	740,397
June 30, 2037	2,931,915	7,344,850	10,276,765	0	704,835	34,834	739,669
June 30, 2038	2,788,236	7,796,832	10,585,068	0	746,928	42,522	789,450
June 30, 2039	2,643,581	8,259,039	10,902,620	0	799,069	49,345	848,414
June 30, 2040	2,545,276	8,684,423	11,229,699	0	779,229	56,895	836,124
June 30, 2041	2,446,919	9,119,671	11,566,590	0	813,581	67,249	880,830
June 30, 2042	2,284,758	9,628,830	11,913,588	0	847,086	80,602	927,688
June 30, 2043	2,162,752	10,108,244	12,270,996	0	864,190	96,987	961,177
June 30, 2044	2,051,309	10,587,817	12,639,126	0	870,038	117,181	987,219
June 30, 2045	1,932,789	11,085,511	13,018,300	0	898,674	140,818	1,039,492
June 30, 2046	1,815,025	11,593,824	13,408,849	0	899,141	161,821	1,060,962
June 30, 2047	1,683,041	12,128,073	13,811,114	0	890,905	185,104	1,076,009
June 30, 2048	1,545,040	12,680,407	14,225,447	0	896,446	210,461	1,106,907
June 30, 2049	1,385,691	13,266,519	14,652,210	0	908,368	234,260	1,142,628
June 30, 2050	1,269,274	13,822,502	15,091,776	0	918,427	260,081	1,178,508
June 30, 2051	1,120,591	14,423,938	15,544,529	0	903,272	289,606	1,192,878
June 30, 2052	979,607	15,031,258	16,010,865	0	869,172	322,775	1,191,947
June 30, 2053	843,752	15,647,439	16,491,191	0	877,101	359,656	1,236,757
June 30, 2054	723,619	16,262,308	16,985,927	0	830,587	400,074	1,230,661
June 30, 2055	633,086	16,862,419	17,495,505	0	793,592	444,202	1,237,794
June 30, 2056	500,977	17,519,393	18,020,370	0	780,514	487,984	1,268,498
June 30, 2057	379,607	18,181,374	18,560,981	0	741,655	534,534	1,276,189
June 30, 2058	295,677	18,822,133	19,117,810	0	725,828	583,638	1,309,466
June 30, 2059	217,668	19,473,676	19,691,344	0	713,496	634,871	1,348,367

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES (CONTINUED)

Table 1: Projection of Contributions using a July 1, 2019 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, 2060	167,172	20,114,912	20,282,084	0	680,850	689,499	1,370,349
June 30, 2061	130,074	20,760,473	20,890,547	0	655,313	748,306	1,403,619
June 30, 2062	82,132	21,435,131	21,517,263	0	646,269	811,881	1,458,150
June 30, 2063	29,956	22,132,825	22,162,781	0	630,135	880,686	1,510,821
June 30, 2064	16,284	22,811,380	22,827,664	0	618,446	954,363	1,572,809
June 30, 2065	0	23,512,494	23,512,494	0	606,603	1,033,053	1,639,656
June 30, 2066	0	24,217,869	24,217,869	0	593,205	1,114,399	1,707,604
June 30, 2067	0	24,944,405	24,944,405	0	579,420	1,199,945	1,779,365
June 30, 2068	0	25,692,737	25,692,737	0	565,191	1,289,286	1,854,477
June 30, 2069	0	26,463,519	26,463,519	0	550,495	1,381,436	1,931,931
June 30, 2070	0	27,257,425	27,257,425	0	535,303	1,478,409	2,013,712
June 30, 2071	0	28,075,148	28,075,148	0	519,558	1,579,628	2,099,186
June 30, 2072	0	28,917,402	28,917,402	0	503,232	1,685,639	2,188,871
June 30, 2073	0	29,784,924	29,784,924	0	486,279	1,796,927	2,283,206
June 30, 2074	0	30,678,472	30,678,472	0	468,657	1,913,047	2,381,704
June 30, 2075	0	31,598,826	31,598,826	0	450,321	2,033,471	2,483,792
June 30, 2076	0	32,546,791	32,546,791	0	431,256	2,160,706	2,591,962
June 30, 2077	0	33,523,195	33,523,195	0	411,447	2,292,511	2,703,958
June 30, 2078	0	34,528,891	34,528,891	0	390,919	2,429,099	2,820,018
June 30, 2079	0	35,564,758	35,564,758	0	369,725	2,572,538	2,942,263
June 30, 2080	0	36,631,701	36,631,701	0	347,954	2,722,244	3,070,198
June 30, 2081	0	37,730,652	37,730,652	0	325,707	2,877,681	3,203,388
June 30, 2082	0	38,862,572	38,862,572	0	303,163	3,038,784	3,341,947
June 30, 2083	0	40,028,449	40,028,449	0	280,444	3,207,341	3,487,785
June 30, 2084	0	41,229,302	41,229,302	0	257,747	3,383,446	3,641,193
June 30, 2085	0	42,466,181	42,466,181	0	235,213	3,566,189	3,801,402
June 30, 2086	0	43,740,166	43,740,166	0	213,034	3,758,105	3,971,139
June 30, 2087	0	45,052,371	45,052,371	0	191,388	3,957,985	4,149,373
June 30, 2088	0	46,403,942	46,403,942	0	170,457	4,165,559	4,336,016
June 30, 2089	0	47,796,060	47,796,060	0	150,392	4,382,764	4,533,156
June 30, 2090	0	49,229,942	49,229,942	0	131,357	4,609,928	4,741,285
June 30, 2091	0	50,706,840	50,706,840	0	113,481	4,846,213	4,959,694
June 30, 2092	0	52,228,045	52,228,045	0	96,879	5,092,429	5,189,308
June 30, 2093	0	53,794,886	53,794,886	0	81,667	5,349,998	5,431,665
June 30, 2094	0	55,408,733	55,408,733	0	67,907	5,619,338	5,687,245

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, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Employer Share of Benefit Payments for Current Plan Members	III. Contributions to Trust for Current Plan Members beyond Pay-as-you- go	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 for Current Plan Members	VII. Trust Withdrawals for Current Plan Members [V. + VI.]	VIII. Investment Earnings	IX. Ending Fiduciary Net Position for Current Plan Members
June 30, 2020	271,886	293,204	50,000	343,204	0	293,204	293,204	8,274	330,160
June 30, 2021	330,160	334,564	46,095	380,659	0	334,564	334,564	21,749	398,004
June 30, 2022	398,004	370,270	42,360	412,630	0	370,270	370,270	27,853	468,217
June 30, 2023	468,217	388,304	39,545	427,849	0	388,304	388,304	32,430	540,192
June 30, 2024	540,192	381,729	37,023	418,752	0	381,729	381,729	37,134	614,349
June 30, 2025	614,349	402,556	34,657	437,213	0	402,556	402,556	41,988	690,994
June 30, 2026	690,994	417,958	32,343	450,301	0	417,958	417,958	47,009	770,346
June 30, 2027	770,346	446,718	30,198	476,916	0	446,718	446,718	52,216	852,760
June 30, 2028	852,760	488,221	27,980	516,201	0	488,221	488,221	57,624	938,364
June 30, 2029	938,364	540,544	25,882	566,426	0	540,544	540,544	63,248	1,027,494
June 30, 2030	1,027,494	569,923	24,032	593,955	0	569,923	569,923	69,115	1,120,641
June 30, 2031	1,120,641	575,296	22,303	597,599	0	575,296	575,296	75,252	1,216,337
June 30, 2032	1,216,337	623,526	20,686	644,212	0	623,526	623,526	81,563	1,313,847
June 30, 2033	1,313,847	621,222	19,137	640,359	0	621,222	621,222	87,997	1,412,029
June 30, 2034	1,412,029	632,524	17,905	650,429	0	632,524	632,524	94,486	1,509,667
June 30, 2035	1,509,667	666,615	16,535	683,150	0	666,615	666,615	100,934	1,605,027
June 30, 2036	1,605,027	712,431	15,317	727,748	0	712,431	712,431	107,235	1,699,613
June 30, 2037	1,699,613	704,835	14,265	719,100	0	704,835	704,835	113,491	1,792,535
June 30, 2038	1,792,535	746,928	13,171	760,099	0	746,928	746,928	119,634	1,882,818
June 30, 2039	1,882,818	799,069	12,124	811,193	0	799,069	799,069	125,604	1,971,201
June 30, 2040	1,971,201	779,229	11,333	790,562	0	779,229	779,229	131,456	2,057,095
June 30, 2041	2,057,095	813,581	10,578	824,159	0	813,581	813,581	137,143	2,137,567
June 30, 2042	2,137,567	847,086	9,589	856,675	0	847,086	847,086	142,462	2,209,016
June 30, 2043	2,209,016	864,190	8,812	873,002	0	864,190	864,190	147,188	2,268,029
June 30, 2044	2,268,029	870,038	8,115	878,153	0	870,038	870,038	151,089	2,310,052
June 30, 2045	2,310,052	898,674	7,423	906,097	0	898,674	898,674	153,861	2,330,518
June 30, 2046	2,330,518	899,141	6,768	905,909	0	899,141	899,141	155,201	2,330,666
June 30, 2047	2,330,666	890,905	6,093	896,998	0	890,905	890,905	155,189	2,306,844
June 30, 2048	2,306,844	896,446	5,431	901,877	0	896,446	896,446	153,583	2,255,397
June 30, 2049	2,255,397	908,368	4,729	913,097	0	908,368	908,368	150,139	2,176,005
June 30, 2050	2,176,005	918,427	4,205	922,632	0	918,427	918,427	144,842	2,064,971
June 30, 2051	2,064,971	903,272	3,604	906,876	0	903,272	903,272	137,438	1,916,407
June 30, 2052	1,916,407	869,172	3,059	872,231	0	869,172	869,172	127,541	1,724,232
June 30, 2053	1,724,232	877,101	2,558	879,659	0	877,101	877,101	114,745	1,481,879
June 30, 2054	1,481,879	830,587	2,130	832,717	0	830,587	830,587	98,615	1,182,550
June 30, 2055	1,182,550	793,592	1,809	795,401	0	793,592	793,592	78,699	818,856
June 30, 2056	818,856	780,514	1,390	781,904	0	780,514	780,514	54,499	386,761
June 30, 2057	386,761	741,655	1,023	742,678	0	741,655	741,655	25,753	26,776
June 30, 2058	26,776	725,828	773	726,601	0	725,828	725,828	1,806	2,579
June 30, 2059	2,579	713,496	553	714,049	0	713,496	713,496	190	743

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, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Employer Share of Benefit Payments for Current Plan Members	III. Contributions to Trust for Current Plan Members beyond Pay-as-you- go	IV. Gross Contributions to Trust for Current Plan Members [III. + III.]	V. Administrative Expenses Withdrawn from the Trust for Current Plan Members	VI. Benefit Payments Withdrawn from the Trust for Current Plan Members	VII. Trust Withdrawals for Current Plan Members [V. + VI.]	VIII. Investment Earnings	IX. Ending Fiduciary Net Position for Current Plan Members
June 30, 2060	743	680,850	412	681,262	0	680,850	680,850	63	475
June 30, 2061	475	655,313	311	655,624	0	655,313	655,313	42	353
June 30, 2062	353	646,269	191	646,460	0	646,269	646,269	30	221
June 30, 2063	221	630,135	68	630,203	0	630,135	630,135	17	85
June 30, 2064	85	618,446	36	618,482	0	618,446	618,446	7	43
June 30, 2065	43	606,603	0	606,603	0	606,603	606,603	3	3
June 30, 2066	3	593,205	0	593,205	0	593,205	593,205	0	0
June 30, 2067	0	579,420	0	579,420	0	579,420	579,420	0	0
June 30, 2068	0	565,191	0	565,191	0	565,191	565,191	0	0
June 30, 2069	0	550,495	0	550,495	0	550,495	550,495	0	0
June 30, 2070	0	535,303	0	535,303	0	535,303	535,303	0	0
June 30, 2071	0	519,558	0	519,558	0	519,558	519,558	0	0
June 30, 2072	0	503,232	0	503,232	0	503,232	503,232	0	0
June 30, 2073	0	486,279	0	486,279	0	486,279	486,279	0	0
June 30, 2074	0	468,657	0	468,657	0	468,657	468,657	0	0
June 30, 2075	0	450,321	0	450,321	0	450,321	450,321	0	0
June 30, 2076	0	431,256	0	431,256	0	431,256	431,256	0	0
June 30, 2077	0	411,447	0	411,447	0	411,447	411,447	0	0
June 30, 2078	0	390,919	0	390,919	0	390,919	390,919	0	0
June 30, 2079	0	369,725	0	369,725	0	369,725	369,725	0	0
June 30, 2080	0	347,954	0	347,954	0	347,954	347,954	0	0
June 30, 2081	0	325,707	0	325,707	0	325,707	325,707	0	0
June 30, 2082	0	303,163	0	303,163	0	303,163	303,163	0	0
June 30, 2083	0	280,444	0	280,444	0	280,444	280,444	0	0
June 30, 2084	0	257,747	0	257,747	0	257,747	257,747	0	0
June 30, 2085	0	235,213	0	235,213	0	235,213	235,213	0	0
June 30, 2086	0	213,034	0	213,034	0	213,034	213,034	0	0
June 30, 2087	0	191,388	0	191,388	0	191,388	191,388	0	0
June 30, 2088	0	170,457	0	170,457	0	170,457	170,457	0	0
June 30, 2089	0	150,392	0	150,392	0	150,392	150,392	0	0
June 30, 2090	0	131,357	0	131,357	0	131,357	131,357	0	0
June 30, 2091	0	113,481	0	113,481	0	113,481	113,481	0	0
June 30, 2092	0	96,879	0	96,879	0	96,879	96,879	0	0
June 30, 2093	0	81,667	0	81,667	0	81,667	81,667	0	0
June 30, 2094	0	67,907	0	67,907	0	67,907	67,907	0	0

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES

Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2019 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 [6.65%]	VI. Present Value of Unfunded Benefit Payments using the Municipal Bond Rate [2.66%]	VII. Present Value of Benefit Payments using the Single Equivalent Discount Rate [4.75%]	
June 30, 2020	271,886	293,204	271,886	21,318	271,886	21,318	293,204	Sum of Column V.
June 30, 2021	330,160	334,564	330,160	4,404	309,573	4,290	319,394	8,156,489
June 30, 2022	398,004	370,270	370,270	0	325,534	0	337,453	
June 30, 2023	468,217	388,304	388,304	0	320,103	0	337,842	Sum of Column VI.
June 30, 2024	540,192	381,729	381,729	0	295,061	0	317,062	4,261,085
June 30, 2025	614,349	402,556	402,556	0	291,757	0	319,199	
June 30, 2026	690,994	417,958	417,958	0	284,032	0	316,385	Sum of Column VII.
June 30, 2027	770,346	446,718	446,718	0	284,648	0	322,822	[V. + VI.]
June 30, 2028	852,760	488,221	488,221	0	291,695	0	336,816	12,417,574
June 30, 2029	938,364	540,544	540,544	0	302,819	0	356,004	
June 30, 2030	1,027,494	569,923	569,923	0	299,370	0	358,333	
June 30, 2031	1,120,641	575,296	575,296	0	283,349	0	345,310	
June 30, 2032	1,216,337	623,526	623,526	0	287,955	0	357,289	
June 30, 2033	1,313,847	621,222	621,222	0	269,002	0	339,828	
June 30, 2034	1,412,029	632,524	632,524	0	256,818	0	330,321	
June 30, 2035	1,509,667	666,615	666,615	0	253,783	0	332,339	
June 30, 2036	1,605,027	712,431	712,431	0	254,313	0	339,076	
June 30, 2037	1,699,613	704,835	704,835	0	235,914	0	320,249	
June 30, 2038	1,792,535	746,928	746,928	0	234,414	0	323,986	
June 30, 2039	1,882,818	799,069	799,069	0	235,141	0	330,887	
June 30, 2040	1,971,201	779,229	779,229	0	215,005	0	308,040	
June 30, 2041	2,057,095	813,581	813,581	0	210,486	0	307,036	
June 30, 2042	2,137,567	847,086	847,086	0	205,489	0	305,185	
June 30, 2043	2,209,016	864,190	864,190	0	196,566	0	297,230	
June 30, 2044	2,268,029	870,038	870,038	0	185,557	0	285,673	
June 30, 2045	2,310,052	898,674	898,674	0	179,713	0	281,695	
June 30, 2046	2,330,518	899,141	899,141	0	168,595	0	269,062	
June 30, 2047	2,330,666	890,905	890,905	0	156,635	0	254,509	
June 30, 2048	2,306,844	896,446	896,446	0	147,781	0	244,480	
June 30, 2049	2,255,397	908,368	908,368	0	140,410	0	236,498	
June 30, 2050	2,176,005	918,427	918,427	0	133,113	0	228,275	
June 30, 2051	2,064,971	903,272	903,272	0	122,753	0	214,328	
June 30, 2052	1,916,407	869,172	869,172	0	110,754	0	196,885	
June 30, 2053	1,724,232	877,101	877,101	0	104,795	0	189,672	
June 30, 2054	1,481,879	830,587	830,587	0	93,050	0	171,469	
June 30, 2055	1,182,550	793,592	793,592	0	83,362	0	156,403	
June 30, 2056	818,856	780,514	780,514	0	76,876	0	146,851	
June 30, 2057	386,761	741,655	386,761	354,894	35,718	134,343	133,212	
June 30, 2058	26,776	725,828	26,776	699,052	2,319	257,765	124,458	
June 30, 2059	2,579	713,496	2,579	710,917	209	255,347	116,796	

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES (CONTINUED)

Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2019 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 [6.65%]	VI. Present Value of Unfunded Benefit Payments using the Municipal Bond Rate [2.66%]	VII. Present Value of Benefit Payments using the Single Equivalent Discount Rate [4.75%]
June 30, 2060	743	680,850	743	680,107	57	237,950	106,399
June 30, 2061	475	655,313	475	654,838	34	223,173	97,764
June 30, 2062	353	646,269	353	645,916	24	214,428	92,043
June 30, 2063	221	630,135	221	629,914	14	203,697	85,676
June 30, 2064	85	618,446	85	618,361	5	194,779	80,274
June 30, 2065	43	606,603	43	606,560	2	186,111	75,166
June 30, 2066	3	593,205	3	593,202	0	177,296	70,173
June 30, 2067	0	579,420	0	579,420	0	168,689	65,435
June 30, 2068	0	565,191	0	565,191	0	160,283	60,933
June 30, 2069	0	550,495	0	550,495	0	152,070	56,658
June 30, 2070	0	535,303	0	535,303	0	144,041	52,596
June 30, 2071	0	519,558	0	519,558	0	136,182	48,734
June 30, 2072	0	503,232	0	503,232	0	128,484	45,063
June 30, 2073	0	486,279	0	486,279	0	120,939	41,570
June 30, 2074	0	468,657	0	468,657	0	113,536	38,247
June 30, 2075	0	450,321	0	450,321	0	106,267	35,084
June 30, 2076	0	431,256	0	431,256	0	99,131	32,075
June 30, 2077	0	411,447	0	411,447	0	92,126	29,215
June 30, 2078	0	390,919	0	390,919	0	85,262	26,498
June 30, 2079	0	369,725	0	369,725	0	78,550	23,925
June 30, 2080	0	347,954	0	347,954	0	72,009	21,496
June 30, 2081	0	325,707	0	325,707	0	65,658	19,209
June 30, 2082	0	303,163	0	303,163	0	59,530	17,069
June 30, 2083	0	280,444	0	280,444	0	53,642	15,073
June 30, 2084	0	257,747	0	257,747	0	48,023	13,225
June 30, 2085	0	235,213	0	235,213	0	42,689	11,522
June 30, 2086	0	213,034	0	213,034	0	37,662	9,962
June 30, 2087	0	191,388	0	191,388	0	32,958	8,544
June 30, 2088	0	170,457	0	170,457	0	28,593	7,265
June 30, 2089	0	150,392	0	150,392	0	24,574	6,119
June 30, 2090	0	131,357	0	131,357	0	20,907	5,102
June 30, 2091	0	113,481	0	113,481	0	17,594	4,208
June 30, 2092	0	96,879	0	96,879	0	14,631	3,429
June 30, 2093	0	81,667	0	81,667	0	12,014	2,760
June 30, 2094	0	67,907	0	67,907	0	9,731	2,191

APPENDIX II – PLAN PROVISIONS

Effective Date

GASB 74 was adopted for the fiscal year ending June 30, 2017

GASB 75 was adopted for the fiscal year ending June 30, 2018

Plan Year

July 1 through June 30.

Premium Effective Date

Medicare Supplement Plans: effective January 1, 2020

Non-Medicare Plans: effective July 1, 2020

Dental Plans: effective July 1, 2020

Creditable Service

Elapsed time from date of hire to termination of service date.

Benefits Offered

Comprehensive Medical, Dental & \$5,000 of Group Term Life Insurance. The Town also pays half the deductible for Active plans.

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

Spousal benefits do not change after the death of a plan participant.

APPENDIX II – PLAN PROVISIONS

Eligibility

Hire Date	Eligibility
Before April 2, 2012	<ul style="list-style-type: none"> • Age 55 with 10 years of creditable service • 20 years of service regardless of age
On or after April 2, 2012	<ul style="list-style-type: none"> • Age 60 with 10 years of creditable service

Contributions

Group	Individual	Two-Person / Family
Medical	Retirees pay 50% of premiums. The Town also reimburses 50% of the deductible for Active plans.	Retirees pay 50% of premiums. The Town also reimburses 50% of the deductible for Active plans.
Dental	Retirees pay 100% of premiums	Retirees pay 100% of premiums
Life	Retirees pay 50% of premiums	N/A

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

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

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

4.75% per annum (previously 7.50%, used in the calculation of the Interest Cost)

Net Long Term Rate of Return

6.65% (based on investment policy)

Municipal Bond Rate

2.66% as of June 30, 2020 (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, 2020

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:

Non-Public Safety Employees

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%

Public Safety Employees

Service	Male	Female
0	9.00%	9.00%
5	6.00%	6.00%
10	3.50%	3.50%
15	2.00%	2.00%
20	1.50%	1.50%
25	1.50%	1.50%
30	1.50%	1.50%

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Retirement Rates for Eligible Employees

Age	Standard Male	Standard Female	Male Teachers	Female Teachers	Public 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

Age	Standard	Teachers	Public
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%

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Trend Rate

Medicare Supplement Plans: Initial Trend of 4.50% for 2020 grading down 0.00% per year for an ultimate trend rate of 4.50%.

Active Plans: Initial Trend of 4.50% for 2020 grading down 0.00% per year for an ultimate trend rate of 4.50%.

Dental Plans: Initial Trend of 4.50% for 2020 grading down 0.00% per year for an ultimate trend rate of 4.50%.

Participation Rate

It was assumed that 80% of employees eligible to receive retirement benefits would enroll in the retiree medical and dental plans upon retirement. For life insurance plans, it was assumed that 80% of eligible employees would elect coverage 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.

Spouse Demographics

It was assumed that a male spouse is three years older than a female spouse and same sex spouses were assumed to be the same age. For current retirees, the actual census information was used, if available.

Medicare Eligibility

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.

School Demographics

In the absence of census data specifying which participants were teachers it was assumed that two thirds of school participants were teachers. If available, actual census data was used.

Compensation Increases

3.00% per year.

Inflation Rate

2.50% per year.

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	<u>June 30, 2020</u>	<u>June 30, 2019</u>
I. Total OPEB Liability	10,185,913	6,690,039
II. Total OPEB Liability (Excluding Implicit Subsidy)	<u>8,027,830</u>	<u>N/A</u>
III. Liability from Implicit Subsidy [I. - II.]	2,158,083	N/A

	For the Measurement Period Ending	
Impact on Payments	<u>June 30, 2020</u>	<u>June 30, 2019</u>
IV. Employer Payments (Including Implicit Subsidy)	293,204	319,888
V. Actual Employer Payments	<u>225,280</u>	<u>N/A</u>
VI. Implicit Subsidy [IV. - V.]	67,924	N/A

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

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

ANNUAL PER CAPITA CLAIMS*

ACTIVE EMPLOYEES			RETIREE - NOT MEDICARE ELIGIBLE			RETIREE - MEDICARE ELIGIBLE**		
Age Bracket	Female	Male	Age Bracket	Female	Male	Age Bracket	Female	Male
24 & Under	4,498	2,835	44 & Under	9,238	6,054	65 to 69	4,859	4,859
25 to 29	6,635	2,950	45 to 49	10,147	7,643	70 to 74	4,859	4,859
30 to 34	8,385	3,703	50 to 54	11,937	10,066	75 to 79	4,859	4,859
35 to 39	8,637	4,650	55 to 59	13,800	13,087	80 to 84	4,859	4,859
40 to 44	8,840	5,793	60 to 64	16,421	16,794	85 to 89	4,859	4,859
45 to 49	9,710	7,314	65 to 69	19,685	20,948	90 & Over	4,859	4,859
50 to 54	11,423	9,633	70 to 74	23,213	25,103			
55 to 59	13,206	12,523	75 to 79	26,959	29,649			
60 to 64	15,714	16,071	80 to 84	30,910	34,079			
65 to 69	18,837	20,046	85 to 89	35,283	39,008			
70 & Over	22,213	24,022	90 & Over	35,283	39,008			

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

**There are two grandfathered retirees not included in the general claims

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, 2020 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.

APPENDIX IV – PLAN DEMOGRAPHICS

Active Employees

Valuation Date	July 1, 2019
A. Average Age at Hire	32.78
B. Average Service	<u>11.95</u>
C. Average Current Age	44.73

Retired Employees & Spouses

Valuation Date	July 1, 2019
A. Under Age 65	16
B. Age 65 & Over	<u>51</u>
C. Total	67

Average Service Age

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-24	1									1
25-29	5	2								7
30-34	9	1	4							14
35-39	4		4	3						11
40-44		2	1	6						9
45-49	5		2	1	1	1				10
50-54	2	2		3	2	4	1			14
55-59	3	1	2		3					9
60-64	1	1	1	2	1	1		1		8
65-69					1					1
70+										
Total	30	9	14	15	8	6	1	1		84

APPENDIX IV – PLAN DEMOGRAPHICS

Plan Offerings

	Number of Contracts			
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
Tufts HMO 500/1000	22		40	62
Tufts HMO 1500/3000	10		6	16
Blue Cross/Blue Shield Medex Bronze		1		1
United Healthcare	1			1
Tufts Medicare Preferred	28	11		39
Total	61	12	46	119

	Per Contract Costs (monthly)		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Tufts HMO 500/1000	891.85		2,318.82
Tufts HMO 1500/3000	818.98		2,129.37
Blue Cross/Blue Shield Medex Bronze	208.56	417.12	
United Healthcare	279.75	559.50	
Tufts Medicare Preferred	414.00	828.00	
Dental Plan	45.22		133.73

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.

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:

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

Medical inflation and claims cost assumptions – 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.

GLOSSARY

Accrual Accounting – 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.

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

Amortization – Allows the recognition of liability over a fixed period of time.

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

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

Discount Rate – 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.

Entry Age Normal – 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.

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

GLOSSARY

Government Accounting Standards Board (GASB) – “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.”

Implicit Subsidy – 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.

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

Net OPEB Liability (NOL) – Total OPEB Liability less the Fiduciary Net Position.

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

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

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

Service Cost – 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.

Total OPEB Liability (TOL) – 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.