

**Town of Canton**  
**Other Postemployment Benefits Plan**

**GASB 74 & GASB 75 Actuarial Valuation**

With a Valuation Date of July 1, 2018

As of the Measurement Date:  
June 30, 2020

For the Reporting Date:  
June 30, 2020

Delivered August 3, 2020



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August 3, 2020

*Personal and Confidential*

Mr. Randy Scollins  
Finance Director  
Town of Canton  
801 Washington St  
Canton, MA 02021

Dear Mr. Scollins:

We have performed an actuarial valuation of the Town of Canton 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, 2018. The figures presented in this report reflect the adoption, by the Town of Canton, 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,



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

**August 3, 2020**

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Canton other postemployment benefit programs with a Valuation Date of July 1, 2018 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.



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



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Sarah F. Rothenberg, ASA, MAAA  
Consulting Actuary

## EXECUTIVE SUMMARY

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

For the year ending on the Measurement Date of June 30, 2020, the Plan saw an experience gain of \$61,259 or 0.07% of the beginning Total OPEB Liability ("TOL"). This was due to the repeal of the ACA excise tax. During the period there was an investment loss of \$269,918 due to asset performance below the expected rate of return.

### 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 5.75% to 6.00% decreasing the disclosed liability by \$2.9 million.
- ✓ Assumption changes caused Service Cost to decrease by \$140 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.

### 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 5.45 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 \$6,380,381 of OPEB assets as of June 30, 2020.
- ✓ Funding Policy - The Town is expected to contribute \$1 million in Fiscal 2021 & 2022 which will then increase by \$100 thousand per year until contributions reach \$1.5 million per year beginning in Fiscal 2027.
- ✓ Investment Policy - The Town is expected to earn 7.00% on assets based on its investment policy.

## EXECUTIVE SUMMARY

### Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare supplement) plans - represent 69.84% 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 (6.00%) – 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

### 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 retirees are 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 31 retirees or covered spouses who are over the age of 65 and are enrolled in Active medical plans rather than Medicare Supplement (Senior) plans. 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.

## 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.

<b>Representative Plan Statistics</b>		
<b>Valuation Date</b>	<b>July 1, 2018</b>	<b>July 1, 2018</b>
<b>Measurement Date &amp; Period Ending</b>	<b>June 30, 2020</b>	<b>June 30, 2019</b>
<b>Reporting Date/Fiscal Year End</b>	<b>June 30, 2020</b>	<b>June 30, 2019</b>
Total OPEB Liability	88,952,265	88,688,109
Per Eligible Active Plan Participant	63,596	64,185
Per Retiree/Spouse Plan Participant	77,745	76,627
Total Annual Service Cost (Annual Benefit Accrual)	2,011,440	2,040,579
Per Eligible Active Plan Participant	2,980	3,023
Expected Employer Share of Retiree Costs	3,875,429	3,723,578
Per Retiree/Spouse Plan Participant	6,546	6,290
Net OPEB Liability as a % of Covered Payroll	172.10%	179.10%
Average Annual Medical Premium		
Individual Active Plan	10,468	10,017
2-Person Active Plan	N/A	N/A
Family Active Plan	26,245	25,115
Medicare Supplement Plan	3,926	3,757



## 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	592	88,952,265	88,952,265	3,875,429	3,875,429
June 30, 2025	637	104,725,340	90,336,998	5,104,776	4,403,425
June 30, 2030	664	122,865,052	91,423,138	6,341,443	4,718,629
June 30, 2035	690	141,755,955	90,987,753	8,076,291	5,183,864
June 30, 2040	683	165,288,199	91,516,068	8,780,398	4,861,493
June 30, 2045	680	196,865,103	94,023,870	10,229,034	4,885,444
June 30, 2050	682	238,682,000	98,333,824	11,879,169	4,894,060

PRINCIPAL RESULTS OF THE VALUATION

**Town of Canton**

**Assuming Funding - 6.00% discount rate**

**Comparison of Plan Liabilities to Prior Valuation**

Valuation Date	July 1, 2018	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	42,927,426	43,325,132
B. Retirees/Disabled	<u>46,024,839</u>	<u>45,362,977</u>
C. Total	88,952,265	88,688,109
II. Fiduciary Net Position [Plan Assets]	6,380,381	5,219,494
III. Net OPEB Liability (Asset) [I. - II.]	82,571,884	83,468,615
IV. Funded Ratio [II. / I.]	7.17%	5.89%
V. Number of Eligible Participants		
A. Actives	675	675
B. Retirees/Disabled & Dependents	<u>592</u>	<u>592</u>
C. Total	1,267	1,267
VI. Service Cost	2,011,440	2,040,579
VII. Financial Statement Expense	4,409,946	5,369,556
VIII. Employer Contribution to the OPEB Trust	(1,030,000)	(800,000)
IX. Deferred Inflow of Resources	(8,716,226)	(8,110,445)
X. Deferred Outflow of Resources	250,135	45,602
XI. Money Weighted Rate of Return	2.35%	5.55%
XII. 20-year Municipal Bond Rate (SAPIHG)	2.66%	2.79%
XIII. Expected Long Term Rate of Return (Net of Expense)	7.00%	7.05%
XIV. Crossover Year	2062	2061
XV. Discount Rate	6.00%	5.75%

## PRINCIPAL RESULTS OF THE VALUATION

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

	Town Employees and Retirees	School Employees and Retirees	Public Safety Employees and Retirees	Food Service Employees and Retirees	Water Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	Total
I. Total OPEB Liability							
A. Actives	6,163,123	25,154,870	9,595,321	867,818	798,985	347,309	42,927,426
B. Retirees/Disabled	<u>5,995,857</u>	<u>28,599,977</u>	<u>9,789,380</u>	<u>62,404</u>	<u>1,036,289</u>	<u>540,932</u>	<u>46,024,839</u>
C. Total	12,158,980	53,754,847	19,384,701	930,222	1,835,274	888,241	88,952,265
II. Fiduciary Net Position [Plan Assets]	872,141	3,855,735	1,390,429	66,723	131,641	63,712	6,380,381
III. Net OPEB Liability (Asset) [I. - II.]	11,286,839	49,899,112	17,994,272	863,499	1,703,633	824,529	82,571,884
IV. Number of Eligible Participants							
A. Actives	112	444	92	11	13	3	675
B. Retirees/Disabled	<u>105</u>	<u>361</u>	<u>108</u>	<u>1</u>	<u>14</u>	<u>3</u>	<u>592</u>
C. Total	217	805	200	12	27	6	1,267
<b>For the Reporting Date and Fiscal Year Ending June 30, 2020</b>							
V. Service Cost	313,587	1,260,693	377,913	19,810	32,090	7,347	2,011,440
VI. Financial Statement Expense	245,866	2,986,738	1,001,730	50,311	90,570	34,731	4,409,946
VII. Employer Share of Costs	(626,611)	(2,429,068)	(678,487)	(18,493)	(74,741)	(48,029)	(3,875,429)
VIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(135,833)	(624,914)	(226,816)	(11,077)	(21,299)	(10,061)	(1,030,000)
IX. Total Employer Contribution [VII. + VIII.]	(762,444)	(3,053,982)	(905,303)	(29,570)	(96,040)	(58,090)	(4,905,429)

PRINCIPAL RESULTS OF THE VALUATION

**Town of Canton**

**Assuming Funding - 6.00% 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	
<b>Present Value of Future Benefits</b>							
A. Participants	14,368,291	17,183,887	31,552,178	4,181,728	28,506,949	32,688,677	64,240,855
B. Spouses	<u>10,098,825</u>	<u>13,283,925</u>	<u>23,382,750</u>	<u>3,191,447</u>	<u>10,144,715</u>	<u>13,336,162</u>	<u>36,718,912</u>
C. Total	24,467,116	30,467,812	54,934,928	7,373,175	38,651,664	46,024,839	100,959,767
<b>Total OPEB Liability</b>							
A. Participants	11,427,067	13,235,391	24,662,458	4,181,728	28,506,949	32,688,677	57,351,135
B. Spouses	<u>8,026,506</u>	<u>10,238,462</u>	<u>18,264,968</u>	<u>3,191,447</u>	<u>10,144,715</u>	<u>13,336,162</u>	<u>31,601,130</u>
C. Total	19,453,573	23,473,853	42,927,426	7,373,175	38,651,664	46,024,839	88,952,265
<b>Service Cost</b>							
A. Participants	483,303	677,455	1,160,758	0	0	0	1,160,758
B. Spouses	<u>330,940</u>	<u>519,742</u>	<u>850,682</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>850,682</u>
C. Total	814,243	1,197,197	2,011,440	0	0	0	2,011,440

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

<b>Components of the Town's OPEB Expenses for the Fiscal Year Ending June 30, 2020</b>	
<b>Description</b>	<b>Amount</b>
I. Service Cost	2,011,440
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	5,105,363
III. Deferred (Inflows)/Outflows from Plan Experience*	(1,111,488)
IV. Deferred (Inflows)/Outflows from Changes of Assumptions*	(1,252,008)
V. Projected Earnings on OPEB Plan Investments	(400,805)
VI. Deferred (Inflows)/Outflows from Earnings on Plan Investments**	57,444
VII. Financial Statement Expense Prior to Plan Design Changes [I. + II.+ III. + IV. + V. + VI.]	4,409,946
VIII. Deferred (Inflows)/Outflows from Plan Design Changes***	0
IX. Financial Statement Expense [VII. + VIII.]	4,409,946

\* Amortized over 5.45 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		
		Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
<b>I.</b>	<b>Balances for June 30, 2019</b>	88,688,109	5,219,494	83,468,615
<b>II.</b>	<b>Prior Period Adjustment</b>	0	0	0
<b>III.</b>	<b>Balances for June 30, 2019 with Adjustment [I. + II.]</b>	88,688,109	5,219,494	83,468,615
	<b>Changes for the year:</b>			
IV.	Service Cost	2,011,440	0	2,011,440
V.	Interest on Total OPEB Liability, Service Cost, and Benefit Payments	5,105,363	0	5,105,363
VI.	Changes in Benefit Terms *	0	0	0
VII.	Change in Assumptions **	(2,915,959)	0	(2,915,959)
VIII.	Differences Between Actual and Expected Experience **	(61,259)	0	(61,259)
IX.	Net Investment Income	0	130,887	(130,887)
X.	Employer Contributions to Trust	0	4,905,429	(4,905,429)
XI.	Benefit Payments Withdrawn from Trust	0	(3,875,429)	3,875,429
XII.	Benefit Payments Excluding Implicit Cost	(2,998,522)	0	(2,998,522)
XIII.	Implicit Cost Amount	(876,907)	0	(876,907)
XIV.	Total Benefit Payments Including Implicit Cost [XII. + XIII.]	(3,875,429)	0	(3,875,429)
XV.	Administrative Expense	0	0	0
XVI.	Other Charges	0	0	0
<b>XVII.</b>	<b>Net Changes [IV.+V.+VI.+VII.+VIII.+IX.+X.+XI.+XIV.+XV.+XVI.]</b>	264,156	1,160,887	(896,731)
<b>XVIII.</b>	<b>Balances at June 30, 2020 [III.+XVII.]</b>	88,952,265	6,380,381	82,571,884

\* Recognized Immediately

\*\* Amortized over 5.45 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			2020	2021	2022	2023	2024	2025	2026
	Actual & Expected Experience	Recognition Period (Years)	Remaining Balance							
2017										
2018	0	5.79	0	0	0	0	0			
2019	(5,996,352)	5.45	(3,795,856)	(1,100,248)	(1,100,248)	(1,100,248)	(1,100,248)	(495,112)		
2020	(61,259)	5.45	(50,019)	(11,240)	(11,240)	(11,240)	(11,240)	(11,240)		(5,059)
2021										
2022										
2023										
2024										
2025										
2026										
Total Remaining Balance			(3,845,875)							
Net increase (decrease) in OPEB Expense				(1,111,488)	(1,111,488)	(1,111,488)	(1,111,488)	(506,352)		(5,059)

Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Changes in Assumptions										
Fiscal	Differences from			2020	2021	2022	2023	2024	2025	2026
	Changes in Actuarial Assumptions	Recognition Period (years)	Remaining Balance							
2017										
2018	0	5.79	0	0	0	0	0			
2019	(3,907,488)	5.45	(2,473,548)	(716,970)	(716,970)	(716,970)	(716,970)	(322,638)		
2020	(2,915,959)	5.45	(2,380,921)	(535,038)	(535,038)	(535,038)	(535,038)	(535,038)		(240,769)
2021										
2022										
2023										
2024										
2025										
2026										
Total Remaining Balance			(4,854,469)							
Net increase (decrease) in OPEB Expense				(1,252,008)	(1,252,008)	(1,252,008)	(1,252,008)	(857,676)		(240,769)

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			2020	2021	2022	2023	2024	2025
	Actual & Expected Earnings	Recognition Period (years)	Remaining Balance						
2017									
2018	(39,705)	5.00	(15,882)	(7,941)	(7,941)	(7,941)			
2019	57,003	5.00	34,201	11,401	11,401	11,401	11,399		
2020	269,918	5.00	215,934	53,984	53,984	53,984	53,984	53,982	
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			234,253						
Net increase (decrease) in OPEB Expense				57,444	57,444	57,444	65,383	53,982	0



EXHIBIT A

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

3. Changes in Net OPEB Expense (Continued)

<b>Statement of Outflows &amp; Inflows Arising from Current &amp; Prior Reporting Periods for the Measurement Period Ending on June 30, 2020 to be Reported for the Fiscal Year Ending June 30, 2020</b>			
	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>	<b>Total</b>
I. Contributions made subsequent to the Measurement Date	0	0	0
II. Differences Between Actual & Expected Experience	0	(3,845,875)	(3,845,875)
III. Changes of Assumptions	0	(4,854,469)	(4,854,469)
IV. Net Difference Between Projected & Actual Earnings on OPEB Plan Investments	<u>250,135</u>	<u>(15,882)</u>	<u>234,253</u>
V. Total [I.+II.+III.+IV.]	250,135	(8,716,226)	(8,466,091)

EXHIBIT A

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

3. Changes in Net OPEB Expense (Continued)

<b>Annual Amortization of Deferred (Inflows)/Outflows</b>	
The balance of deferred (inflows)/outflows as of June 30, 2020 will be recognized in future years as shown below.	
	<b>Year ending June 30:</b>
	2021 (2,306,052)
	2022 (2,306,052)
	2023 (2,298,113)
	2024 (1,310,046)
	2025 (245,828)
	Thereafter 0

4. Discount Rate

The discount rate used to measure the Total OPEB liability was 6.00% as of June 30, 2020 and 5.75% 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 \$3,875,429. The Town also contributed \$1,030,000 to an OPEB Trust for a total contribution during the measurement period of \$4,905,429 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.

<b>Investment Target Allocation &amp; Expected Long-Term Real Rate of Return</b>			
<b>Asset Class</b>	<b>Target Allocation</b>	<b>Asset Class</b>	<b>Long-Term Expected Real Rate of Return*</b>
Domestic Equity - Large Cap	23.33%	Domestic Equity - Large Cap	4.80%
Domestic Equity - Small/Mid Cap	11.67%	Domestic Equity - Small/Mid Cap	5.29%
International Equity - Developed Market	13.33%	International Equity - Developed Market	5.45%
International Equity-Emerging Market	6.67%	International Equity-Emerging Market	6.42%
Domestic Fixed Income	20.00%	Domestic Fixed Income	2.05%
International Fixed Income	5.00%	International Fixed Income	3.00%
Alternatives	20.00%	Alternatives	6.50%
Real Estate	0.00%	Real Estate	6.25%
Cash & Cash Equivalents	0.00%	Cash & Cash Equivalents	0.00%
<b>Total</b>	<b>100.00%</b>		
		I. Real Rate of Return**	4.75%
		II. Inflation Assumption	2.50%
		III. Total Nominal Return [I. + II.]	7.25%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	7.00%

\* 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	7,670,645	(4,905,429)	2,765,216	47,989,715	10.22%
June 30, 2019	7,622,221	(4,523,578)	3,098,643	46,591,956	9.71%
June 30, 2018	8,240,517	(4,179,556)	4,060,961	45,486,461	9.19%
June 30, 2017	7,882,229	(3,783,880)	4,098,349	44,161,613	8.57%

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>
<b>I. Total OPEB Liability</b>	78,949,545	88,952,265	101,257,941
<b>II. Fiduciary Net Position</b>	<u>6,380,381</u>	<u>6,380,381</u>	<u>6,380,381</u>
<b>III. Net OPEB Liability (Asset) [I.-II.]</b>	72,569,164	82,571,884	94,877,560
<b>IV. Service Cost</b>	1,635,809	2,011,440	2,511,653

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>
<b>I. Total OPEB Liability</b>	100,679,099	88,952,265	79,371,160
<b>II. Fiduciary Net Position</b>	<u>6,380,381</u>	<u>6,380,381</u>	<u>6,380,381</u>
<b>III. Net OPEB Liability (Asset) [I.-II.]</b>	94,298,718	82,571,884	72,990,779
<b>IV. Service Cost</b>	2,562,974	2,011,440	1,596,542

EXHIBIT A

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

10. Money Weighted Rate of Return

	Plan	Periods	Period
	Investments /	Invested	Weight
	Net External		
	Cash Flows		
I. Beginning value - June 30, 2019	5,219,494	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	500,000	7	0.5833
December	0	6	0.5000
January	0	5	0.4167
February	0	4	0.3333
March	250,000	3	0.2500
April	0	2	0.1667
May	0	1	0.0833
<u>June</u>	<u>280,000</u>	0	0.0000
II. Total net external cash flow	1,030,000		
III. Earnings and increase in fair value	130,887		
IV. Ending value - June 30, 2020 [I.+II.+III.]	6,380,381		
Money Weighted Rate of Return	2.35%		
Asset Value - June 30, 2020	6,380,381		

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

11. OPEB Liability, OPEB Expense

	Fiscal Year Ending June 30, 2020						Total
	Town Employees and Retirees	School Employees and Retirees	Public Safety Employees and Retirees	Food Service Employees and Retirees	Water Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	
I. Total OPEB Liability as of June 30, 2020	12,158,980	53,754,847	19,384,701	930,222	1,835,274	888,241	88,952,265
II. Fiduciary Net Position as of June 30, 2020	872,141	3,855,735	1,390,429	66,723	131,641	63,712	6,380,381
III. Net OPEB Liability (Asset) as of June 30, 2020 [I. - II.]	11,286,839	49,899,112	17,994,272	863,499	1,703,633	824,529	82,571,884
IV. Service Cost	313,587	1,260,693	377,913	19,810	32,090	7,347	2,011,440
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	302,153	3,361,893	1,213,764	58,816	114,329	54,408	5,105,363
VI. Projected Earnings on OPEB Plan Investments	(54,658)	(242,275)	(87,406)	(4,199)	(8,270)	(3,997)	(400,805)
VII. Net Recognition of Deferred (Inflows)/Outflows	(315,216)	(1,393,573)	(502,541)	(24,116)	(47,579)	(23,027)	(2,306,052)
VIII. Expense Related to Change in Benefit Terms	0	0	0	0	0	0	0
IX. Financial Statement Expense [IV. + V. + VII. + VIII.]	245,866	2,986,738	1,001,730	50,311	90,570	34,731	4,409,946
X. Employer Share of Costs	(626,611)	(2,429,068)	(678,487)	(18,493)	(74,741)	(48,029)	(3,875,429)
XI. Employer (Payments) Withdrawals to/from OPEB Trust	(135,833)	(624,914)	(226,816)	(11,077)	(21,299)	(10,061)	(1,030,000)
XII. Total Employer Contribution [X. + XI.]	(762,444)	(3,053,982)	(905,303)	(29,570)	(96,040)	(58,090)	(4,905,429)
XIII. Net OPEB Expense [IX. + XII.]	(516,578)	(67,244)	96,427	20,741	(5,470)	(23,359)	(495,483)

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, 2018
For the Measurement Period ending on the Measurement Date of:	June 30, 2020
For the Reporting Period & Fiscal Year ending on:	June 30, 2020
<b>Source of Deferred Inflow/Outflow</b>	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	(3,845,875)
II. Deferred (Inflow)/Outflow from Investment Experience	234,253
III. Deferred (Inflow)/Outflow from Changes in Assumptions	(4,854,469)
<b>Change in Deferred Inflow/Outflow</b>	
I. Deferred Outflow at the beginning of the period	45,602
II. Deferred Outflow created during the period	269,918
III. Deferred Outflow recognized during the period	65,385
IV. Change in Deferred Outflow (II. - III. )	204,533
V. Deferred Outflow at end of the period (I. + IV. )	250,135
VI. Deferred Inflow at the beginning of the period	(8,110,445)
VII. Deferred Inflow created during the period	(2,977,218)
VIII. Deferred Inflow recognized during the period	(2,371,437)
IX. Change in Deferred Inflow (VII. - VIII. )	(605,781)
X. Deferred Inflow at end of the period (VI. + IX. )	(8,716,226)
<b>Net OPEB Liability</b>	
I. Net OPEB Liability at beginning of period	83,468,615
II. Service Cost	2,011,440
III. Interest on Total OPEB Liability, Service Cost, and Payments	5,105,363
IV. Projected Investment Income	(400,805)
V. Total Employer Contributions	(4,905,429)
VI. Expense Related to Change in Benefit Terms	0
VII. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V. + VI. )	1,810,569
VIII. Deferred Outflow created during the period	269,918
IX. Deferred Inflow created during the period	(2,977,218)
X. Net OPEB Liability at end of period (I. + VII. + VIII. + IX. )	82,571,884
<b>Net OPEB Expense</b>	
I. Service Cost	2,011,440
II. Interest on Total OPEB Liability, Service Cost, and Payments	5,105,363
III. Projected Investment Income	(400,805)
IV. Recognition of Deferred (Inflow)/Outflow	(2,306,052)
V. Expense Related to Change in Benefit Terms	0
VI. Financial Statement Expense (I. + II. + III. + IV. + V. )	4,409,946
VII. Benefit Payments	(3,875,429)
VIII. Contributions to Trust	(1,030,000)
IX. Total Employer Payments (VII. + VIII. )	(4,905,429)
X. Total Net OPEB Expense under GASB 75 (VI. + IX. )	(495,483)



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:

	<b>Actuarially Determined Contribution - Deficiency / (Excess)</b>			
	<u>June 30, 2020</u>	<u>June 30, 2019</u>	<b>For the Fiscal Year Ending:</b>	
			<u>June 30, 2018</u>	<u>June 30, 2017</u>
I. Service Cost	2,011,440	2,040,579	2,675,741	2,515,860
II. 30 Year Level Dollar Amortization of NOL	<u>5,659,205</u>	<u>5,581,642</u>	<u>5,564,776</u>	<u>5,366,369</u>
III. Actuarial Determined Contribution [I. + II.]	7,670,645	7,622,221	8,240,517	7,882,229
IV. Contributions in Relation to the Actuarially Determined Contribution	<u>(4,905,429)</u>	<u>(4,523,578)</u>	<u>(4,179,556)</u>	<u>(3,783,880)</u>
V. Contribution Deficiency / (Excess) [III. + IV.]	<u>2,765,216</u>	<u>3,098,643</u>	<u>4,060,961</u>	<u>4,098,349</u>
Covered Employee Payroll	47,989,715	46,591,956	45,486,461	44,161,613
Contributions as a % of Covered Employee Payroll	10.22%	9.71%	9.19%	8.57%
Discount Rate	6.00%	5.75%	5.25%	5.25%
Money Weighted Rate of Return	2.35%	5.55%	5.05%	8.23%

## 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	July 1, 2018	July 1, 2018	July 1, 2016	July 1, 2016
GASB 75 Measurement Date	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
For the Reporting Period & Fiscal Year Ending on:	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
<b>Total OPEB Liability</b>	88,952,265	88,688,109	94,811,510	90,505,695
I. Service Cost	2,011,440	2,040,579	2,675,741	2,515,860
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	5,105,363	5,463,438	4,809,630	4,590,666
III. Changes in Benefit Terms	0	0	0	0
IV. Difference Between Expected & Actual Plan Experience	(61,259)	(5,996,352)	0	0
V. Changes of Assumptions	(2,915,959)	(3,907,488)	0	0
VI. Benefit Payments Excluding Implicit Cost	(2,998,522)	(2,867,284)	(2,839,350)	N/A
VII. Implicit Cost Amount	(876,907)	(856,294)	(340,206)	N/A
VIII. Total Benefit Payments Including Implicit Cost [VI.+VII.]	(3,875,429)	(3,723,578)	(3,179,556)	(3,013,880)
IX. Net Change in OPEB Liability [I.+II.+III.+IV.+V.+VIII.]	264,156	(6,123,401)	4,305,815	4,092,646
X. Total OPEB Liability - Beginning of Period	88,688,109	94,811,510	90,505,695	86,413,049
XI. Prior Period Adjustment	0	0	0	0
XII. Total OPEB Liability - Beginning of Period with Adjustment	88,688,109	94,811,510	90,505,695	86,413,049
XIII. Total OPEB Liability - End of Period [IX.+XII.]	88,952,265	88,688,109	94,811,510	90,505,695
<b>Plan Fiduciary Net Position</b>	6,380,381	5,219,494	4,155,794	2,980,371
XIV. Earning from Plan Investments	130,887	263,700	175,423	202,021
XV. Employer Contribution to Trust	4,905,429	4,523,578	4,179,556	3,783,880
XVI. Benefit Payments from Trust, Including Refunds of Member Contributions	(3,875,429)	(3,723,578)	(3,179,556)	(3,013,880)
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.]	1,160,887	1,063,700	1,175,423	972,021
XX. Plan Fiduciary Net Position - Beginning of Period	5,219,494	4,155,794	2,980,371	2,008,350
XXI. Prior Period Adjustment	0	0	0	0
XXII. Plan Fiduciary Net Position - Beginning of Period with Adjustment	5,219,494	4,155,794	2,980,371	2,008,350
XXIII. Plan Fiduciary Net Position - End of Period [XIX.+XXII.]	6,380,381	5,219,494	4,155,794	2,980,371
XXIV. Net OPEB Liability [XIII.-XXIII.]	82,571,884	83,468,615	90,655,716	87,525,324
XXV. Plan Fiduciary Net Position as % of Total OPEB Liability [XXIII. / XIII.]	7.17%	5.89%	4.38%	3.29%
XXVI. Covered Employee Payroll	47,989,715	46,591,956	45,486,461	44,161,613
XXVII. Plan NOL as % of Covered Employee Payroll [XXIV. / XXVI.]	172.06%	179.15%	199.30%	198.19%
Single Discount Rate to calculate Plan Liabilities	6.00%	5.75%	5.25%	5.25%

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, 2018.
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:	7.00%, 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:	6.00%, 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-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females Teacher: RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Post-Retirement Mortality:	General: RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females Teachers: RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Disabled Mortality:	General: RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB and a base year 2012 for males and females Teachers: RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB and a base year 2012 for males and females

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Plan Membership

At July 1, 2018, OPEB plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits:	592
Active Employees:	<u>675</u>
Total:	1,267

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 5.75% to 6.00%

Contributions:

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town contributed \$1,030,000 beyond the pay-as-you-go cost 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 \$3,875,429. \$876,907 of the \$3,875,429 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 - 6.00% 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 7.00% 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	88,952,265	6,380,381	82,571,884	7.17%	2,011,440	3,875,429	1,030,000	4,905,429	3,875,429	0	1,030,000
2021	June 30, 2021	91,851,053	7,793,145	84,057,908	8.48%	2,115,184	4,119,198	934,000	5,053,198	4,119,198	0	934,000
2022	June 30, 2022	94,933,638	9,373,073	85,560,565	9.87%	2,220,276	4,456,435	1,000,000	5,456,435	4,456,435	0	1,000,000
2023	June 30, 2023	98,071,648	11,167,037	86,904,611	11.39%	2,326,595	4,698,295	1,100,000	5,798,295	4,698,295	0	1,100,000
2024	June 30, 2024	101,370,568	13,190,019	88,180,549	13.01%	2,442,874	4,837,460	1,200,000	6,037,460	4,837,460	0	1,200,000
2025	June 30, 2025	104,725,340	15,458,051	89,267,289	14.76%	2,559,175	5,104,776	1,300,000	6,404,776	5,104,776	0	1,300,000
2026	June 30, 2026	108,156,944	17,988,286	90,168,658	16.63%	2,681,808	5,360,262	1,400,000	6,760,262	5,360,262	0	1,400,000
2027	June 30, 2027	111,729,576	20,799,078	90,930,498	18.62%	2,804,246	5,548,248	1,500,000	7,048,248	5,548,248	0	1,500,000
2028	June 30, 2028	115,343,568	23,806,626	91,536,942	20.64%	2,926,446	5,810,012	1,500,000	7,310,012	5,810,012	0	1,500,000
2029	June 30, 2029	119,069,267	27,024,702	92,044,565	22.70%	3,061,544	6,081,849	1,500,000	7,581,849	6,081,849	0	1,500,000
2030	June 30, 2030	122,865,052	30,468,043	92,397,009	24.80%	3,193,541	6,341,443	1,500,000	7,841,443	6,341,443	0	1,500,000
2031	June 30, 2031	126,509,430	34,152,418	92,357,012	27.00%	3,338,345	6,753,927	1,500,000	8,253,927	6,753,927	0	1,500,000
2032	June 30, 2032	130,217,149	38,094,699	92,122,450	29.25%	3,483,445	7,130,224	1,500,000	8,630,224	7,130,224	0	1,500,000
2033	June 30, 2033	134,146,843	42,312,940	91,833,903	31.54%	3,636,015	7,390,020	1,500,000	8,890,020	7,390,020	0	1,500,000
2034	June 30, 2034	137,855,860	46,826,458	91,029,402	33.97%	3,801,302	7,771,053	1,500,000	9,271,053	7,771,053	0	1,500,000
2035	June 30, 2035	141,755,955	51,655,922	90,100,033	36.44%	3,962,100	8,076,291	1,500,000	9,576,291	8,076,291	0	1,500,000
2036	June 30, 2036	145,948,290	56,823,449	89,124,841	38.93%	4,142,880	8,152,859	1,500,000	9,652,859	8,152,859	0	1,500,000
2037	June 30, 2037	150,291,066	62,352,702	87,938,364	41.49%	4,323,473	8,388,574	1,500,000	9,888,574	8,388,574	0	1,500,000
2038	June 30, 2038	155,008,480	68,269,003	86,739,477	44.04%	4,512,768	8,534,835	1,500,000	10,034,835	8,534,835	0	1,500,000
2039	June 30, 2039	160,031,678	74,599,445	85,432,233	46.62%	4,715,220	8,618,328	1,500,000	10,118,328	8,618,328	0	1,500,000
2040	June 30, 2040	165,288,199	81,373,018	83,915,181	49.23%	4,917,130	8,780,398	1,500,000	10,280,398	8,780,398	0	1,500,000
2041	June 30, 2041	170,951,335	88,620,741	82,330,594	51.84%	5,135,243	8,968,509	1,500,000	10,468,509	8,968,509	0	1,500,000
2042	June 30, 2042	177,000,503	96,375,805	80,624,698	54.45%	5,372,592	9,254,477	1,500,000	10,754,477	9,254,477	0	1,500,000
2043	June 30, 2043	183,283,905	104,673,723	78,610,182	57.11%	5,619,820	9,496,967	1,500,000	10,996,967	9,496,967	0	1,500,000
2044	June 30, 2044	189,907,732	113,552,496	76,355,236	59.79%	5,872,463	9,845,636	1,500,000	11,345,636	9,845,636	0	1,500,000
2045	June 30, 2045	196,865,103	123,052,783	73,812,320	62.51%	6,152,526	10,229,034	1,500,000	11,729,034	10,229,034	0	1,500,000
2046	June 30, 2046	204,274,880	133,218,090	71,056,790	65.22%	6,438,757	10,490,086	1,500,000	11,990,086	10,490,086	0	1,500,000
2047	June 30, 2047	212,189,634	144,094,968	68,094,666	67.91%	6,745,633	10,899,398	1,500,000	12,399,398	10,899,398	0	1,500,000
2048	June 30, 2048	220,395,871	155,733,228	64,662,643	70.66%	7,064,243	11,290,410	1,500,000	12,790,410	11,290,410	0	1,500,000
2049	June 30, 2049	229,308,319	168,186,166	61,122,153	73.34%	7,397,100	11,542,262	1,500,000	13,042,262	11,542,262	0	1,500,000
2050	June 30, 2050	238,682,000	181,510,810	57,171,190	76.05%	7,746,288	11,879,169	1,500,000	13,379,169	11,879,169	0	1,500,000
2051	June 30, 2051	248,734,434	195,768,179	52,966,255	78.71%	8,111,459	12,239,304	1,500,000	13,739,304	12,239,304	0	1,500,000

## APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

### CONTRIBUTION PROJECTION DISCLOSURES

**Table 1: Projection of Contributions using a July 1, 2018 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	47,989,715	0	47,989,715	0	3,875,429	0	3,875,429
June 30, 2021	44,869,151	4,560,255	49,429,406	0	4,119,198	0	4,119,198
June 30, 2022	42,513,486	8,398,802	50,912,288	0	4,456,435	0	4,456,435
June 30, 2023	40,522,694	11,916,963	52,439,657	0	4,698,295	0	4,698,295
June 30, 2024	38,724,892	15,287,955	54,012,847	0	4,837,460	0	4,837,460
June 30, 2025	37,075,536	18,557,696	55,633,232	0	5,104,776	0	5,104,776
June 30, 2026	35,552,142	21,750,087	57,302,229	0	5,360,262	0	5,360,262
June 30, 2027	34,078,843	24,942,453	59,021,296	0	5,548,248	0	5,548,248
June 30, 2028	32,565,713	28,226,222	60,791,935	0	5,810,012	0	5,810,012
June 30, 2029	30,943,482	31,672,211	62,615,693	0	6,081,849	0	6,081,849
June 30, 2030	29,367,263	35,126,901	64,494,164	0	6,307,146	34,297	6,341,443
June 30, 2031	27,851,003	38,577,986	66,428,989	0	6,660,369	93,558	6,753,927
June 30, 2032	26,343,288	42,078,571	68,421,859	0	6,951,812	178,412	7,130,224
June 30, 2033	24,775,242	45,699,273	70,474,515	0	7,097,303	292,717	7,390,020
June 30, 2034	23,199,274	49,389,476	72,588,750	0	7,338,872	432,181	7,771,053
June 30, 2035	21,729,027	53,037,386	74,766,413	0	7,540,553	535,738	8,076,291
June 30, 2036	20,280,024	56,729,381	77,009,405	0	7,497,904	654,955	8,152,859
June 30, 2037	18,958,931	60,360,756	79,319,687	0	7,598,758	789,816	8,388,574
June 30, 2038	17,627,819	64,071,459	81,699,278	0	7,635,606	899,229	8,534,835
June 30, 2039	16,310,787	67,839,469	84,150,256	0	7,596,291	1,022,037	8,618,328
June 30, 2040	15,078,684	71,596,080	86,674,764	0	7,587,076	1,193,322	8,780,398
June 30, 2041	13,877,558	75,397,449	89,275,007	0	7,541,994	1,426,515	8,968,509
June 30, 2042	12,640,154	79,313,103	91,953,257	0	7,539,220	1,715,257	9,254,477
June 30, 2043	11,593,205	83,118,650	94,711,855	0	7,428,203	2,068,764	9,496,967
June 30, 2044	10,631,921	86,921,290	97,553,211	0	7,367,994	2,477,642	9,845,636
June 30, 2045	9,586,855	90,892,952	100,479,807	0	7,402,964	2,826,070	10,229,034
June 30, 2046	8,706,366	94,787,835	103,494,201	0	7,278,946	3,211,140	10,490,086
June 30, 2047	7,784,555	98,814,472	106,599,027	0	7,268,458	3,630,940	10,899,398
June 30, 2048	6,914,931	102,882,067	109,796,998	0	7,286,681	4,003,729	11,290,410
June 30, 2049	6,090,747	107,000,161	113,090,908	0	7,135,940	4,406,322	11,542,262
June 30, 2050	5,291,690	111,191,945	116,483,635	0	7,017,774	4,861,395	11,879,169
June 30, 2051	4,609,426	115,368,718	119,978,144	0	6,878,685	5,360,619	12,239,304
June 30, 2052	3,942,663	119,634,825	123,577,488	0	6,702,366	5,902,719	12,605,085
June 30, 2053	3,400,386	123,884,427	127,284,813	0	6,600,147	6,494,400	13,094,547
June 30, 2054	2,854,657	128,248,700	131,103,357	0	6,437,373	7,132,734	13,570,107
June 30, 2055	2,368,156	132,668,302	135,036,458	0	6,314,524	7,778,650	14,093,174
June 30, 2056	1,909,962	137,177,590	139,087,552	0	6,184,312	8,463,321	14,647,633
June 30, 2057	1,571,370	141,688,809	143,260,179	0	6,069,438	9,187,706	15,257,144
June 30, 2058	1,216,217	146,341,767	147,557,984	0	5,915,464	9,931,252	15,846,716
June 30, 2059	941,121	151,043,603	151,984,724	0	5,708,242	10,712,178	16,420,420



APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES (CONTINUED)

**Table 1: Projection of Contributions using a July 1, 2018 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	700,464	155,843,802	156,544,266	0	5,544,607	11,542,997	17,087,604
June 30, 2061	509,071	160,731,523	161,240,594	0	5,402,590	12,418,078	17,820,668
June 30, 2062	340,018	165,737,794	166,077,812	0	5,202,282	13,345,761	18,548,043
June 30, 2063	237,091	170,823,055	171,060,146	0	5,002,287	14,329,159	19,331,446
June 30, 2064	136,513	176,055,437	176,191,950	0	4,848,304	15,364,998	20,213,302
June 30, 2065	82,865	181,394,844	181,477,709	0	4,665,561	16,441,308	21,106,869
June 30, 2066	34,889	186,887,151	186,922,040	0	4,479,731	17,569,977	22,049,708
June 30, 2067	16,231	192,513,470	192,529,701	0	4,303,296	18,749,398	23,052,694
June 30, 2068	1,153	198,304,439	198,305,592	0	4,121,130	19,971,454	24,092,584
June 30, 2069	0	204,254,760	204,254,760	0	3,935,017	21,245,095	25,180,112
June 30, 2070	0	210,382,403	210,382,403	0	3,746,621	22,569,920	26,316,541
June 30, 2071	0	216,693,875	216,693,875	0	3,556,534	23,951,506	27,508,040
June 30, 2072	0	223,194,691	223,194,691	0	3,365,983	25,390,744	28,756,727
June 30, 2073	0	229,890,532	229,890,532	0	3,175,549	26,888,910	30,064,459
June 30, 2074	0	236,787,248	236,787,248	0	2,985,931	28,450,507	31,436,438
June 30, 2075	0	243,890,865	243,890,865	0	2,797,975	30,077,873	32,875,848
June 30, 2076	0	251,207,591	251,207,591	0	2,612,045	31,771,400	34,383,445
June 30, 2077	0	258,743,819	258,743,819	0	2,429,304	33,530,248	35,959,552
June 30, 2078	0	266,506,134	266,506,134	0	2,249,823	35,364,466	37,614,289
June 30, 2079	0	274,501,318	274,501,318	0	2,074,311	37,269,809	39,344,120
June 30, 2080	0	282,736,358	282,736,358	0	1,903,348	39,248,658	41,152,006
June 30, 2081	0	291,218,449	291,218,449	0	1,737,069	41,310,358	43,047,427
June 30, 2082	0	299,955,002	299,955,002	0	1,576,377	43,458,506	45,034,883
June 30, 2083	0	308,953,652	308,953,652	0	1,422,014	45,696,307	47,118,321
June 30, 2084	0	318,222,262	318,222,262	0	1,274,608	48,030,642	49,305,250
June 30, 2085	0	327,768,930	327,768,930	0	1,134,734	50,468,042	51,602,776
June 30, 2086	0	337,601,998	337,601,998	0	1,003,123	53,008,904	54,012,027
June 30, 2087	0	347,730,058	347,730,058	0	880,031	55,660,025	56,540,056
June 30, 2088	0	358,161,960	358,161,960	0	766,196	58,430,134	59,196,330
June 30, 2089	0	368,906,819	368,906,819	0	661,455	61,319,747	61,981,202
June 30, 2090	0	379,974,024	379,974,024	0	566,129	64,336,351	64,902,480
June 30, 2091	0	391,373,245	391,373,245	0	479,675	67,488,414	67,968,089
June 30, 2092	0	403,114,442	403,114,442	0	402,456	70,782,124	71,184,580
June 30, 2093	0	415,207,875	415,207,875	0	334,035	74,223,800	74,557,835
June 30, 2094	0	427,664,111	427,664,111	0	274,320	77,822,135	78,096,455

## 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, 2018 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	5,219,494	3,875,429	1,030,000	4,905,429	0	3,875,429	3,875,429	130,887	6,380,381
June 30, 2021	6,380,381	4,119,198	847,831	4,967,029	0	4,119,198	4,119,198	434,594	7,662,806
June 30, 2022	7,662,806	4,456,435	835,034	5,291,469	0	4,456,435	4,456,435	565,128	9,062,968
June 30, 2023	9,062,968	4,698,295	850,024	5,548,319	0	4,698,295	4,698,295	663,655	10,576,647
June 30, 2024	10,576,647	4,837,460	860,348	5,697,808	0	4,837,460	4,837,460	769,968	12,206,963
June 30, 2025	12,206,963	5,104,776	866,356	5,971,132	0	5,104,776	5,104,776	884,297	13,957,616
June 30, 2026	13,957,616	5,360,262	868,605	6,228,867	0	5,360,262	5,360,262	1,006,920	15,833,141
June 30, 2027	15,833,141	5,548,248	866,099	6,414,347	0	5,548,248	5,548,248	1,138,121	17,837,361
June 30, 2028	17,837,361	5,810,012	803,537	6,613,549	0	5,810,012	5,810,012	1,276,263	19,917,161
June 30, 2029	19,917,161	6,081,849	741,271	6,823,120	0	6,081,849	6,081,849	1,419,707	22,078,139
June 30, 2030	22,078,139	6,307,146	683,021	6,990,167	0	6,307,146	6,307,146	1,568,971	24,295,834
June 30, 2031	24,295,834	6,660,369	628,890	7,289,259	0	6,660,369	6,660,369	1,722,347	26,553,513
June 30, 2032	26,553,513	6,951,812	577,519	7,529,331	0	6,951,812	6,951,812	1,878,617	28,831,237
June 30, 2033	28,831,237	7,097,303	527,323	7,624,626	0	7,097,303	7,097,303	2,036,331	31,102,174
June 30, 2034	31,102,174	7,338,872	479,398	7,818,270	0	7,338,872	7,338,872	2,193,647	33,343,038
June 30, 2035	33,343,038	7,540,553	435,938	7,976,491	0	7,540,553	7,540,553	2,349,012	35,592,250
June 30, 2036	35,592,250	7,497,904	395,017	7,892,921	0	7,497,904	7,497,904	2,505,049	37,837,361
June 30, 2037	37,837,361	7,598,758	358,529	7,957,287	0	7,598,758	7,598,758	2,660,952	40,067,026
June 30, 2038	40,067,026	7,635,606	323,647	7,959,253	0	7,635,606	7,635,606	2,815,828	42,307,272
June 30, 2039	42,307,272	7,596,291	290,744	7,887,035	0	7,596,291	7,596,291	2,971,513	44,547,492
June 30, 2040	44,547,492	7,587,076	260,953	7,848,029	0	7,587,076	7,587,076	3,127,303	46,742,426
June 30, 2041	46,742,426	7,541,994	233,171	7,775,165	0	7,541,994	7,541,994	3,279,993	48,829,075
June 30, 2042	48,829,075	7,539,220	206,194	7,745,414	0	7,539,220	7,539,220	3,425,130	50,745,142
June 30, 2043	50,745,142	7,428,203	183,608	7,611,811	0	7,428,203	7,428,203	3,558,478	52,418,464
June 30, 2044	52,418,464	7,367,994	163,479	7,531,473	0	7,367,994	7,367,994	3,674,917	53,779,218
June 30, 2045	53,779,218	7,402,964	143,116	7,546,080	0	7,402,964	7,402,964	3,769,470	54,865,734
June 30, 2046	54,865,734	7,278,946	126,186	7,405,132	0	7,278,946	7,278,946	3,844,943	55,625,723
June 30, 2047	55,625,723	7,268,458	109,540	7,377,998	0	7,268,458	7,268,458	3,897,570	56,001,893
June 30, 2048	56,001,893	7,286,681	94,469	7,381,150	0	7,286,681	7,286,681	3,923,383	56,016,016
June 30, 2049	56,016,016	7,135,940	80,786	7,216,726	0	7,135,940	7,135,940	3,923,901	55,614,381
June 30, 2050	55,614,381	7,017,774	68,143	7,085,917	0	7,017,774	7,017,774	3,895,351	54,716,480
June 30, 2051	54,716,480	6,878,685	57,628	6,936,313	0	6,878,685	6,878,685	3,832,136	53,245,625
June 30, 2052	53,245,625	6,702,366	47,857	6,750,223	0	6,702,366	6,702,366	3,728,840	51,119,603
June 30, 2053	51,119,603	6,600,147	40,072	6,640,219	0	6,600,147	6,600,147	3,579,751	48,245,026
June 30, 2054	48,245,026	6,437,373	32,661	6,470,034	0	6,437,373	6,437,373	3,378,276	44,523,229
June 30, 2055	44,523,229	6,314,524	26,306	6,340,830	0	6,314,524	6,314,524	3,117,531	39,888,416
June 30, 2056	39,888,416	6,184,312	20,598	6,204,910	0	6,184,312	6,184,312	2,792,898	34,238,591
June 30, 2057	34,238,591	6,069,438	16,453	6,085,891	0	6,069,438	6,069,438	2,397,267	27,464,605
June 30, 2058	27,464,605	5,915,464	12,363	5,927,827	0	5,915,464	5,915,464	1,922,948	19,468,664
June 30, 2059	19,468,664	5,708,242	9,288	5,717,530	0	5,708,242	5,708,242	1,363,126	10,128,900

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, 2018 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	10,128,900	5,544,607	6,712	5,551,319	0	5,544,607	5,544,607	709,254	4,587,467
June 30, 2061	4,587,467	5,402,590	4,736	5,407,326	0	5,402,590	5,402,590	321,286	326,022
June 30, 2062	326,022	5,202,282	3,071	5,205,353	0	5,202,282	5,202,282	22,927	25,998
June 30, 2063	25,998	5,002,287	2,079	5,004,366	0	5,002,287	5,002,287	1,891	3,970
June 30, 2064	3,970	4,848,304	1,162	4,849,466	0	4,848,304	4,848,304	318	1,480
June 30, 2065	1,480	4,665,561	685	4,666,246	0	4,665,561	4,665,561	127	812
June 30, 2066	812	4,479,731	280	4,480,011	0	4,479,731	4,479,731	66	346
June 30, 2067	346	4,303,296	126	4,303,422	0	4,303,296	4,303,296	29	155
June 30, 2068	155	4,121,130	9	4,121,139	0	4,121,130	4,121,130	11	20
June 30, 2069	20	3,935,017	0	3,935,017	0	3,935,017	3,935,017	1	1
June 30, 2070	1	3,746,621	0	3,746,621	0	3,746,621	3,746,621	0	0
June 30, 2071	0	3,556,534	0	3,556,534	0	3,556,534	3,556,534	0	0
June 30, 2072	0	3,365,983	0	3,365,983	0	3,365,983	3,365,983	0	0
June 30, 2073	0	3,175,549	0	3,175,549	0	3,175,549	3,175,549	0	0
June 30, 2074	0	2,985,931	0	2,985,931	0	2,985,931	2,985,931	0	0
June 30, 2075	0	2,797,975	0	2,797,975	0	2,797,975	2,797,975	0	0
June 30, 2076	0	2,612,045	0	2,612,045	0	2,612,045	2,612,045	0	0
June 30, 2077	0	2,429,304	0	2,429,304	0	2,429,304	2,429,304	0	0
June 30, 2078	0	2,249,823	0	2,249,823	0	2,249,823	2,249,823	0	0
June 30, 2079	0	2,074,311	0	2,074,311	0	2,074,311	2,074,311	0	0
June 30, 2080	0	1,903,348	0	1,903,348	0	1,903,348	1,903,348	0	0
June 30, 2081	0	1,737,069	0	1,737,069	0	1,737,069	1,737,069	0	0
June 30, 2082	0	1,576,377	0	1,576,377	0	1,576,377	1,576,377	0	0
June 30, 2083	0	1,422,014	0	1,422,014	0	1,422,014	1,422,014	0	0
June 30, 2084	0	1,274,608	0	1,274,608	0	1,274,608	1,274,608	0	0
June 30, 2085	0	1,134,734	0	1,134,734	0	1,134,734	1,134,734	0	0
June 30, 2086	0	1,003,123	0	1,003,123	0	1,003,123	1,003,123	0	0
June 30, 2087	0	880,031	0	880,031	0	880,031	880,031	0	0
June 30, 2088	0	766,196	0	766,196	0	766,196	766,196	0	0
June 30, 2089	0	661,455	0	661,455	0	661,455	661,455	0	0
June 30, 2090	0	566,129	0	566,129	0	566,129	566,129	0	0
June 30, 2091	0	479,675	0	479,675	0	479,675	479,675	0	0
June 30, 2092	0	402,456	0	402,456	0	402,456	402,456	0	0
June 30, 2093	0	334,035	0	334,035	0	334,035	334,035	0	0
June 30, 2094	0	274,320	0	274,320	0	274,320	274,320	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, 2018 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 [7.00%]	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 [5.99%]	
June 30, 2020	5,219,494	3,875,429	3,875,429	0	3,875,429	0	3,875,429	<b>Sum of Column V.</b>
June 30, 2021	6,380,381	4,119,198	4,119,198	0	3,849,718	0	3,886,336	85,981,473
June 30, 2022	7,662,806	4,456,435	4,456,435	0	3,892,423	0	3,966,824	
June 30, 2023	9,062,968	4,698,295	4,698,295	0	3,835,208	0	3,945,693	<b>Sum of Column VI.</b>
June 30, 2024	10,576,647	4,837,460	4,837,460	0	3,690,475	0	3,832,905	15,396,300
June 30, 2025	12,206,963	5,104,776	5,104,776	0	3,639,635	0	3,816,059	
June 30, 2026	13,957,616	5,360,262	5,360,262	0	3,571,769	0	3,780,525	<b>Sum of Column VII.</b>
June 30, 2027	15,833,141	5,548,248	5,548,248	0	3,455,170	0	3,691,897	[V. + VI.]
June 30, 2028	17,837,361	5,810,012	5,810,012	0	3,381,480	0	3,647,527	101,377,773
June 30, 2029	19,917,161	6,081,849	6,081,849	0	3,308,123	0	3,602,340	
June 30, 2030	22,078,139	6,307,146	6,307,146	0	3,206,233	0	3,524,599	
June 30, 2031	24,295,834	6,660,369	6,660,369	0	3,164,293	0	3,511,581	
June 30, 2032	26,553,513	6,951,812	6,951,812	0	3,086,688	0	3,458,041	
June 30, 2033	28,831,237	7,097,303	7,097,303	0	2,945,128	0	3,330,835	
June 30, 2034	31,102,174	7,338,872	7,338,872	0	2,846,141	0	3,249,502	
June 30, 2035	33,343,038	7,540,553	7,540,553	0	2,733,043	0	3,150,057	
June 30, 2036	35,592,250	7,497,904	7,497,904	0	2,539,799	0	2,955,172	
June 30, 2037	37,837,361	7,598,758	7,598,758	0	2,405,572	0	2,825,616	
June 30, 2038	40,067,026	7,635,606	7,635,606	0	2,259,100	0	2,678,809	
June 30, 2039	42,307,272	7,596,291	7,596,291	0	2,100,438	0	2,514,360	
June 30, 2040	44,547,492	7,587,076	7,587,076	0	1,960,645	0	2,369,343	
June 30, 2041	46,742,426	7,541,994	7,541,994	0	1,821,490	0	2,222,120	
June 30, 2042	48,829,075	7,539,220	7,539,220	0	1,701,701	0	2,095,730	
June 30, 2043	50,745,142	7,428,203	7,428,203	0	1,566,956	0	1,948,141	
June 30, 2044	52,418,464	7,367,994	7,367,994	0	1,452,575	0	1,823,113	
June 30, 2045	53,779,218	7,402,964	7,402,964	0	1,363,990	0	1,728,214	
June 30, 2046	54,865,734	7,278,946	7,278,946	0	1,253,402	0	1,603,202	
June 30, 2047	55,625,723	7,268,458	7,268,458	0	1,169,716	0	1,510,392	
June 30, 2048	56,001,893	7,286,681	7,286,681	0	1,095,933	0	1,428,581	
June 30, 2049	56,016,016	7,135,940	7,135,940	0	1,003,048	0	1,319,939	
June 30, 2050	55,614,381	7,017,774	7,017,774	0	921,905	0	1,224,700	
June 30, 2051	54,716,480	6,878,685	6,878,685	0	844,517	0	1,132,566	
June 30, 2052	53,245,625	6,702,366	6,702,366	0	769,037	0	1,041,151	
June 30, 2053	51,119,603	6,600,147	6,600,147	0	707,765	0	967,313	
June 30, 2054	48,245,026	6,437,373	6,437,373	0	645,149	0	890,122	
June 30, 2055	44,523,229	6,314,524	6,314,524	0	591,437	0	823,776	
June 30, 2056	39,888,416	6,184,312	6,184,312	0	541,347	0	761,181	
June 30, 2057	34,238,591	6,069,438	6,069,438	0	496,534	0	704,811	
June 30, 2058	27,464,605	5,915,464	5,915,464	0	452,278	0	648,098	
June 30, 2059	19,468,664	5,708,242	5,708,242	0	407,882	0	590,041	

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES (CONTINUED)

**Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2018 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 [7.00%]	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 [5.99%]
June 30, 2060	10,128,900	5,544,607	5,544,607	0	370,271	0	540,727
June 30, 2061	4,587,467	5,402,590	5,402,590	0	337,184	0	497,092
June 30, 2062	326,022	5,202,282	1,735,029	3,467,253	101,202	1,151,039	451,603
June 30, 2063	25,998	5,002,287	1,364,479	3,637,808	74,381	1,176,365	409,693
June 30, 2064	3,970	4,848,304	1,296,489	3,551,815	66,051	1,118,795	374,634
June 30, 2065	1,480	4,665,561	1,236,658	3,428,903	58,882	1,052,090	340,133
June 30, 2066	812	4,479,731	1,179,705	3,300,026	52,495	986,309	308,124
June 30, 2067	346	4,303,296	1,128,684	3,174,612	46,939	924,238	279,256
June 30, 2068	155	4,121,130	1,075,555	3,045,575	41,803	863,695	252,316
June 30, 2069	20	3,935,017	1,021,942	2,913,075	37,121	804,712	227,302
June 30, 2070	1	3,746,621	968,198	2,778,423	32,868	747,627	204,185
June 30, 2071	0	3,556,534	914,700	2,641,834	29,021	692,452	182,868
June 30, 2072	0	3,365,983	861,765	2,504,218	25,552	639,373	163,287
June 30, 2073	0	3,175,549	809,365	2,366,184	22,429	588,475	145,340
June 30, 2074	0	2,985,931	757,931	2,228,000	19,629	539,750	128,936
June 30, 2075	0	2,797,975	707,560	2,090,415	17,126	493,296	113,990
June 30, 2076	0	2,612,045	658,153	1,953,892	14,888	449,131	100,399
June 30, 2077	0	2,429,304	609,818	1,819,486	12,892	407,398	88,097
June 30, 2078	0	2,249,823	562,911	1,686,912	11,122	367,926	76,976
June 30, 2079	0	2,074,311	517,234	1,557,077	9,551	330,808	66,959
June 30, 2080	0	1,903,348	472,932	1,430,416	8,162	296,023	57,967
June 30, 2081	0	1,737,069	430,236	1,306,833	6,939	263,440	49,912
June 30, 2082	0	1,576,377	389,310	1,187,067	5,868	233,096	42,734
June 30, 2083	0	1,422,014	350,253	1,071,761	4,934	205,001	36,370
June 30, 2084	0	1,274,608	313,260	961,348	4,124	179,116	30,757
June 30, 2085	0	1,134,734	278,422	856,312	3,426	155,412	25,834
June 30, 2086	0	1,003,123	245,791	757,332	2,826	133,886	21,547
June 30, 2087	0	880,031	215,406	664,625	2,315	114,452	17,834
June 30, 2088	0	766,196	187,450	578,746	1,883	97,081	14,649
June 30, 2089	0	661,455	161,775	499,680	1,519	81,646	11,932
June 30, 2090	0	566,129	138,457	427,672	1,215	68,069	9,635
June 30, 2091	0	479,675	117,347	362,328	962	56,175	7,702
June 30, 2092	0	402,456	98,512	303,944	755	45,902	6,097
June 30, 2093	0	334,035	81,825	252,210	586	37,102	4,774
June 30, 2094	0	274,320	67,263	207,057	450	29,670	3,699

APPENDIX II – PLAN PROVISIONS

<u>Effective Date</u>	GASB 74 was adopted for the fiscal year ending June 30, 2017 GASB 75 was adopted for the fiscal year ending June 30, 2018
<u>Plan Year</u>	July 1 through June 30.
<u>Premium Effective Date</u>	<b>Medicare Supplement Plans:</b> effective January 1, 2019 <b>Non-Medicare Plans:</b> effective July 1, 2019 <b>Dental Plans:</b> effective July 1, 2019
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Benefits Offered</u>	Comprehensive Medical Insurance offered through Blue Cross Blue Shield of Massachusetts as well as Dental and \$5,000 of group term Life Insurance.
<u>Medicare Part B</u>	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.
<u>Surviving Spouse Coverage</u>	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"> <li>• Age 55 with 10 years of creditable service</li> <li>• 20 years of service regardless of age</li> </ul>
On or after April 2, 2012	<ul style="list-style-type: none"> <li>• Age 60 with 10 years of creditable service</li> </ul>

Town Contributions

Group	Individual	Two-Person / Family
<b>Medical</b>	The Town pays 75% of premiums	The Town pays 75% of premiums
<b>Dental</b>	The Town pays 75% of the basic plan premiums	The Town pays 75% of the basic plan premiums
<b>Life</b>	The Town pays 75% of premiums	N/A

### APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

#### Pre-Retirement Mortality

General: RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females  
Teacher: RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females

#### Post-Retirement Mortality

General: RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females  
Teachers: RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females

#### Disabled Mortality

General: RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB and a base year 2012 for males and females  
Teachers: RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB and a base year 2012 for males and females

#### Assumption Experience Study

The mortality assumptions reflect recent experience analysis published in 2014 (based on the years 2006-2011), updated to reflect data through January 1, 2015 for post-retirement mortality, and professional judgement. As such, mortality assumptions reflect observed current mortality as well as expected mortality improvements.

#### Discount Rate

6.00% per annum (previously 5.75%, used in the calculation of the Interest Cost)

#### Net Long Term Rate of Return

7.00% (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**

Age	0-4 Years of	0-4 Years of	5-9 Years of	5-9 Years of	10+ Years	10+ Years
	Service (Males)	Service (Females)	Service (Males)	Service (Females)	of Service (Males)	of Service (Females)
20	27.00%	27.00%	12.00%	12.00%	6.00%	6.00%
30	23.00%	23.00%	10.00%	10.00%	5.50%	5.50%
40	16.00%	16.00%	8.00%	8.00%	3.50%	3.50%
50	18.00%	18.00%	6.00%	6.00%	3.00%	3.00%
60	18.00%	18.00%	5.00%	5.00%	3.50%	3.50%

**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%	1.00%
50 - 51	1.00%	1.50%	2.00%	1.50%	2.00%
52	1.00%	2.50%	2.00%	1.50%	2.00%
53	1.00%	2.50%	2.00%	1.50%	5.00%
54	2.00%	2.50%	2.00%	2.00%	7.50%
55	2.00%	5.50%	6.00%	5.00%	15.00%
56	2.50%	6.50%	20.00%	15.00%	10.00%
57	2.50%	6.50%	40.00%	35.00%	10.00%
58	5.00%	6.50%	50.00%	35.00%	10.00%
59	6.50%	6.50%	50.00%	35.00%	15.00%
60	12.00%	5.00%	40.00%	35.00%	20.00%
61	20.00%	13.00%	40.00%	35.00%	20.00%
62	30.00%	15.00%	35.00%	35.00%	25.00%
63	25.00%	12.50%	35.00%	35.00%	25.00%
64	22.00%	18.00%	35.00%	35.00%	30.00%
65	40.00%	15.00%	35.00%	35.00%	100.00%
66	25.00%	20.00%	40.00%	35.00%	100.00%
67	25.00%	20.00%	40.00%	30.00%	100.00%
68	30.00%	25.00%	40.00%	30.00%	100.00%
69	30.00%	20.00%	40.00%	30.00%	100.00%
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 & ASSUMPTIONSTrend 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%.

**Non-Medicare 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.

<b>Impact of Implicit Subsidy</b>		
	<b>As of the Measurement Date</b>	
<b>Impact on Liability</b>	<b><u>June 30, 2020</u></b>	<b><u>June 30, 2019</u></b>
I. Total OPEB Liability	88,952,265	88,688,109
II. Total OPEB Liability (Excluding Implicit Subsidy)	<u>72,233,594</u>	<u>71,971,366</u>
III. Liability from Implicit Subsidy [I. - II.]	16,718,671	16,716,743

  

	<b>For the Measurement Period Ending</b>	
<b>Impact on Payments</b>	<b><u>June 30, 2020</u></b>	<b><u>June 30, 2019</u></b>
IV. Employer Payments (Including Implicit Subsidy)	3,875,429	3,723,578
V. Actual Employer Payments	<u>2,998,522</u>	<u>2,867,284</u>
VI. Implicit Subsidy [IV. - V.]	876,907	856,294

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	4,799	3,025	44 & Under	9,432	6,181	65 to 69	4,015	4,015
25 to 29	7,080	3,148	45 to 49	10,361	7,804	70 to 74	4,015	4,015
30 to 34	8,946	3,951	50 to 54	12,188	10,278	75 to 79	4,015	4,015
35 to 39	9,216	4,961	55 to 59	14,090	13,362	80 to 84	4,015	4,015
40 to 44	9,432	6,181	60 to 64	16,766	17,147	85 to 89	4,015	4,015
45 to 49	10,361	7,804	65 to 69	20,099	21,388	90 & Over	4,015	4,015
50 to 54	12,188	10,278	70 to 74	23,701	25,631			
55 to 59	14,090	13,362	75 to 79	27,525	30,272			
60 to 64	16,766	17,147	80 to 84	31,559	34,795			
65 to 69	20,099	21,388	85 to 89	36,025	39,828			
70 & Over	23,701	25,631	90 & Over	36,025	39,828			

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

## 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, 2018
A. Average Age at Hire	34.32
B. Average Service	<u>10.94</u>
C. Average Current Age	45.26

### Retired Employees & Spouses

Valuation Date	July 1, 2018
A. Under Age 65	101
B. Age 65 & Over	<u>491</u>
C. Total	592

### 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	20	3								23
25-29	42	7	3							52
30-34	46	24	7	1						78
35-39	27	17	23	2						69
40-44	29	17	22	22	5					95
45-49	32	21	21	19	20	4				117
50-54	16	11	17	16	17	8	4			89
55-59	14	9	13	22	9	8	10			85
60-64	6	6	5	16	9	4	5			51
65-69		1	3	1	2	2	1	1		11
70+				2	1	1	1			5
<b>Total</b>	232	116	114	101	63	27	21	1		675

APPENDIX IV - PLAN DEMOGRAPHICS

Plan Offerings

Number of Contracts

	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
BCBS HMO Blue New England	160		295	455
BCBS PPO (Blue Care Elect)	53		75	128
BCBS Medex II	186	146		332
Total	399	146	370	915

Per Contract Costs (monthly)

	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
BCBS HMO Blue New England	813.54		2,138.30
BCBS PPO (Blue Care Elect)	1,207.50		2,864.50
BCBS Medex II	334.57	669.14	
Dental Plan	N/A		N/A



## 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.