

Town of East Bridgewater 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 September 29, 2020



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September 29, 2020

Personal and Confidential

Ms. Melissa Morrissey
Tax Collector/Treasurer
Town of East Bridgewater
175 Central Street
East Bridgewater, MA 02333

Dear Ms. Morrissey:

We have performed an actuarial valuation of the Town of East Bridgewater 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 East Bridgewater, 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, 2017 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

September 29, 2020

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of East Bridgewater 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.

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 to change from FY 19 to FY 20?

For the year ending on the Measurement Date of June 30, 2020, there was no plan experience because this was an interim valuation. During the period there was an investment loss of \$1,283 below the expected 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 3.00% to 2.75% increasing the disclosed liability by \$2.0 million.
- ✓ Assumption changes caused Service Cost to increase by \$160 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 6.63 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 \$82,324 of OPEB assets as of June 30, 2020.
- ✓ Funding Policy - The Town is expected to contribute \$10,000 annually.
- ✓ Investment Policy - The Town is expected to earn 4.14% 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 77.52% 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 (2.75%) – 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

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 13 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.

Representative Plan Statistics		
Valuation Date	July 1, 2018	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	64,224,339	59,142,235
Per Eligible Active Plan Participant	70,988	65,846
Per Retiree/Spouse Plan Participant	105,249	96,211
Total Annual Service Cost (Annual Benefit Accrual)	2,820,413	2,508,172
Per Eligible Active Plan Participant	6,212	5,525
Expected Employer Share of Retiree Costs	1,605,345	1,541,652
Per Retiree/Spouse Plan Participant	5,281	5,071
Net OPEB Liability as a % of Covered Payroll	242.00%	229.60%

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	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	304	64,224,339	64,224,339	1,605,345	1,605,345
June 30, 2025	345	81,288,205	70,119,920	2,150,233	1,854,810
June 30, 2030	368	101,719,880	75,689,144	2,777,407	2,066,652
June 30, 2035	387	125,213,859	80,370,011	3,601,661	2,311,769
June 30, 2040	394	154,597,432	85,596,850	4,299,110	2,380,313
June 30, 2045	407	191,607,071	91,512,604	5,391,869	2,575,187
June 30, 2050	417	239,638,886	98,728,048	6,559,025	2,702,231

PRINCIPAL RESULTS OF THE VALUATION

Town of East Bridgewater Assuming Funding - 2.75% 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	32,228,694	29,894,076
B. Retirees/Disabled	<u>31,995,645</u>	<u>29,248,159</u>
C. Total	64,224,339	59,142,235
II. Fiduciary Net Position [Plan Assets]	82,324	70,484
III. Net OPEB Liability (Asset) [I. - II.]	64,142,015	59,071,751
IV. Funded Ratio [II. / I.]	0.13%	0.12%
V. Number of Eligible Participants		
A. Actives	454	454
B. Retirees/Disabled & Dependents	<u>304</u>	<u>304</u>
C. Total	758	758
VI. Service Cost	2,820,413	2,508,172
VII. Financial Statement Expense	3,805,361	3,472,750
VIII. Employer Contribution to the OPEB Trust	(10,000)	(10,000)
IX. Deferred Inflow of Resources	(8,978,936)	(10,918,349)
X. Deferred Outflow of Resources	4,932,511	3,991,676
XI. Money Weighted Rate of Return	2.41%	5.42%
XII. 20-year Municipal Bond Rate (SAPIHG)	2.66%	2.79%
XIII. Expected Long Term Rate of Return (Net of Expense)	4.14%	4.26%
XIV. Crossover Year	Immediate	Immediate
XV. Discount Rate	2.75%	3.00%

PRINCIPAL RESULTS OF THE VALUATION

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

	Town Employees and Retirees	School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Water Enterprise Employees and Retirees	Solid Waste Enterprise Employees and Retirees	Total
I. Total OPEB Liability							
A. Actives	4,063,361	21,173,277	3,263,912	2,477,765	1,104,159	146,220	32,228,694
B. Retirees/Disabled	<u>8,169,802</u>	<u>21,947,828</u>	<u>651,927</u>	<u>823,275</u>	<u>402,813</u>	<u>0</u>	<u>31,995,645</u>
C. Total	12,233,163	43,121,105	3,915,839	3,301,040	1,506,972	146,220	64,224,339
II. Fiduciary Net Position [Plan Assets]	15,682	55,273	5,019	4,231	1,932	187	82,324
III. Net OPEB Liability (Asset) [I. - II.]	12,217,481	43,065,832	3,910,820	3,296,809	1,505,040	146,033	64,142,015
IV. Number of Eligible Participants							
A. Actives	60	329	30	25	9	1	454
B. Retirees/Disabled	<u>86</u>	<u>209</u>	<u>4</u>	<u>4</u>	<u>1</u>	<u>0</u>	<u>304</u>
C. Total	146	538	34	29	10	1	758
For the Reporting Date and Fiscal Year Ending June 30, 2020							
V. Service Cost	429,047	1,881,448	225,303	239,920	41,391	3,304	2,820,413
VI. Financial Statement Expense	651,211	2,509,484	284,709	291,556	63,001	5,400	3,805,361
VII. Employer Share of Costs	(393,531)	(1,126,978)	(43,568)	(27,069)	(14,195)	(4)	(1,605,345)
VIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(1,879)	(6,700)	(626)	(538)	(234)	(23)	(10,000)
IX. Total Employer Contribution [VII. + VIII.]	(395,410)	(1,133,678)	(44,194)	(27,607)	(14,429)	(27)	(1,615,345)

PRINCIPAL RESULTS OF THE VALUATION

Town of East Bridgewater
Assuming Funding - 2.75% 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	11,176,916	21,802,224	32,979,140	1,981,612	21,236,359	23,217,971	56,197,111
B. Spouses	<u>7,379,529</u>	<u>16,102,973</u>	<u>23,482,502</u>	<u>1,292,765</u>	<u>7,484,909</u>	<u>8,777,674</u>	<u>32,260,176</u>
C. Total	18,556,445	37,905,197	56,461,642	3,274,377	28,721,268	31,995,645	88,457,287
Total OPEB Liability							
A. Participants	6,698,958	12,078,578	18,777,536	1,981,612	21,236,359	23,217,971	41,995,507
B. Spouses	<u>4,462,883</u>	<u>8,988,275</u>	<u>13,451,158</u>	<u>1,292,765</u>	<u>7,484,909</u>	<u>8,777,674</u>	<u>22,228,832</u>
C. Total	11,161,841	21,066,853	32,228,694	3,274,377	28,721,268	31,995,645	64,224,339
Service Cost							
A. Participants	490,986	1,166,850	1,657,836	0	0	0	1,657,836
B. Spouses	<u>313,847</u>	<u>848,730</u>	<u>1,162,577</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,162,577</u>
C. Total	804,833	2,015,580	2,820,413	0	0	0	2,820,413

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	2,820,413
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,834,977
III. Deferred (Inflows)/Outflows from Plan Experience*	(238,716)
IV. Deferred (Inflows)/Outflows from Changes of Assumptions*	(608,108)
V. Projected Earnings on OPEB Plan Investments	(3,123)
VI. Deferred (Inflows)/Outflows from Earnings on Plan Investments**	(82)
VII. Financial Statement Expense Prior to Plan Design Changes [I. + II. + III. + IV. + V. + VI.]	3,805,361
VIII. Deferred (Inflows)/Outflows from Plan Design Changes***	0
IX. Financial Statement Expense [VII. + VIII.]	3,805,361

* Amortized over 6.63 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	59,142,235	70,484	59,071,751
II. Prior Period Adjustment	0	0	0
III. Balances for June 30, 2019 with Adjustment [I. + II.]	59,142,235	70,484	59,071,751
Changes for the year:			
IV. Service Cost	2,820,413	0	2,820,413
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	1,834,977	0	1,834,977
VI. Changes in Benefit Terms *	0	0	0
VII. Change in Assumptions **	2,032,059	0	2,032,059
VIII. Differences Between Actual and Expected Experience **	0	0	0
IX. Net Investment Income	0	1,840	(1,840)
X. Employer Contributions to Trust	0	1,615,345	(1,615,345)
XI. Benefit Payments Withdrawn from Trust	0	(1,605,345)	1,605,345
XII. Benefit Payments Excluding Implicit Cost	(1,273,476)	0	(1,273,476)
XIII. Implicit Cost Amount	(331,869)	0	(331,869)
XIV. Total Benefit Payments Including Implicit Cost [XII. + XIII.]	(1,605,345)	0	(1,605,345)
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.]	5,082,104	11,840	5,070,264
XVIII. Balances at June 30, 2020 [III.+XVII.]	64,224,339	82,324	64,142,015

* Recognized Immediately

** Amortized over 6.63 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	5,563,159	7.08	3,205,920	785,756	785,756	785,756	785,756	785,756	62,896
2018	0	7.08	0	0	0	0	0	0	0
2019	(6,792,252)	6.63	(4,743,308)	(1,024,472)	(1,024,472)	(1,024,472)	(1,024,472)	(1,024,472)	(645,420)
2020	0	6.63	0	0	0	0	0	0	0
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			(1,537,388)						
Net increase (decrease) in OPEB Expense				(238,716)	(238,716)	(238,716)	(238,716)	(238,716)	(582,524)

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	0	7.08	0	0	0	0	0	0	0
2018	0	7.08	0	0	0	0	0	0	0
2019	(6,063,816)	6.63	(4,234,612)	(914,602)	(914,602)	(914,602)	(914,602)	(914,602)	(576,204)
2020	2,032,059	6.63	1,725,565	306,494	306,494	306,494	306,494	306,494	306,494
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			(2,509,047)						
Net increase (decrease) in OPEB Expense				(608,108)	(608,108)	(608,108)	(608,108)	(608,108)	(269,710)

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	0	5.00	0	0	0	0			
2018	0	5.00	0	0	0	0	0		
2019	(1,694)	5.00	(1,016)	(339)	(339)	(339)	(338)		
2020	1,283	5.00	1,026	257	257	257	257	255	
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			10						
Net increase (decrease) in OPEB Expense				(82)	(82)	(82)	(81)	255	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	3,205,920	(4,743,308)	(1,537,388)
III. Changes of Assumptions	1,725,565	(4,234,612)	(2,509,047)
IV. Net Difference Between Projected & Actual Earnings on OPEB Plan Investments	<u>1,026</u>	<u>(1,016)</u>	<u>10</u>
V. Total [I.+II.+III.+IV.]	4,932,511	(8,978,936)	(4,046,425)

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	(846,906)
2022	(846,906)
2023	(846,905)
2024	(846,569)
2025	(852,234)
Thereafter	193,095

4. Discount Rate

The discount rate used to measure the Total OPEB liability was 2.75% as of June 30, 2020 and 3.00% 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 \$1,605,345. The Town also contributed \$10,000 to an OPEB Trust for a total contribution during the measurement period of \$1,615,345 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	12.25%	Domestic Equity - Large Cap	4.80%
Domestic Equity - Small/Mid Cap	0.00%	Domestic Equity - Small/Mid Cap	5.29%
International Equity - Developed Market	0.00%	International Equity - Developed Market	5.45%
International Equity-Emerging Market	0.00%	International Equity-Emerging Market	6.42%
Domestic Fixed Income	63.50%	Domestic Fixed Income	2.05%
International Fixed Income	0.00%	International Fixed Income	3.00%
Alternatives	0.00%	Alternatives	6.50%
Real Estate	0.00%	Real Estate	6.25%
Cash & Cash Equivalents	24.25%	Cash & Cash Equivalents	0.00%
Total	100.00%		
		I. Real Rate of Return**	1.89%
		II. Inflation Assumption	2.50%
		III. Total Nominal Return [I. + II.]	4.39%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	4.14%

* 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	5,903,251	(1,615,345)	4,287,906	26,502,877	6.09%
June 30, 2019	5,434,188	(1,609,022)	3,825,166	25,730,949	6.25%
June 30, 2018	5,946,980	(1,438,388)	4,508,592	23,431,218	6.32%
June 30, 2017	5,796,457	(1,343,091)	4,453,366	22,748,755	5.90%
June 30, 2016	5,641,053	(1,154,083)	4,486,970	22,748,755	5.07%

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	54,521,724	64,224,339	76,917,504
II. Fiduciary Net Position	<u>82,324</u>	<u>82,324</u>	<u>82,324</u>
III. Net OPEB Liability (Asset) [I.-II.]	54,439,400	64,142,015	76,835,180
IV. Service Cost	2,159,171	2,820,413	3,773,509

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	76,178,905	64,224,339	55,295,889
II. Fiduciary Net Position	<u>82,324</u>	<u>82,324</u>	<u>82,324</u>
III. Net OPEB Liability (Asset) [I.-II.]	76,096,581	64,142,015	55,213,565
IV. Service Cost	3,773,332	2,820,413	2,177,616

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 - July 1, 2019	70,484	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	10,000	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>0</u>	0	0.0000
II. Total net external cash flow	10,000		
III. Earnings and increase in fair value	1,840		
IV. Ending value - June 30, 2020 [I.+II.+III.]	82,324		
Money Weighted Rate of Return	2.41%		
Asset Value - June 30, 2020	82,324		

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	Police Employees and Retirees	Fire Employees and Retirees	Water Enterprise Employees and Retirees	Solid Waste Enterprise Employees and Retirees	
I. Total OPEB Liability as of June 30, 2020	12,233,163	43,121,105	3,915,839	3,301,040	1,506,972	146,220	64,224,339
II. Fiduciary Net Position as of June 30, 2020	15,682	55,273	5,019	4,231	1,932	187	82,324
III. Net OPEB Liability (Asset) as of June 30, 2020 [I. - II.]	12,217,481	43,065,832	3,910,820	3,296,809	1,505,040	146,033	64,142,015
IV. Service Cost	429,047	1,881,448	225,303	239,920	41,391	3,304	2,820,413
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	384,073	1,198,757	111,234	95,327	41,555	4,031	1,834,977
VI. Projected Earnings on OPEB Plan Investments	(594)	(2,097)	(191)	(161)	(73)	(7)	(3,123)
VII. Net Recognition of Deferred (Inflows)/Outflows	(161,315)	(568,624)	(51,637)	(43,530)	(19,872)	(1,928)	(846,906)
VIII. Expense Related to Change in Benefit Terms	0	0	0	0	0	0	0
IX. Financial Statement Expense [IV. + V. + VII. + VIII.]	651,211	2,509,484	284,709	291,556	63,001	5,400	3,805,361
X. Employer Share of Costs	(393,531)	(1,126,978)	(43,568)	(27,069)	(14,195)	(4)	(1,605,345)
XI. Employer (Payments) Withdrawals to/from OPEB Trust	(1,879)	(6,700)	(626)	(538)	(234)	(23)	(10,000)
XII. Total Employer Contribution [X. + XI.]	(395,410)	(1,133,678)	(44,194)	(27,607)	(14,429)	(27)	(1,615,345)
XIII. Net OPEB Expense [IX. + XII.]	255,801	1,375,806	240,515	263,949	48,572	5,373	2,190,016

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
Source of Deferred Inflow/Outflow	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	(1,537,388)
II. Deferred (Inflow)/Outflow from Investment Experience	10
III. Deferred (Inflow)/Outflow from Changes in Assumptions	(2,509,047)
Change in Deferred Inflow/Outflow	
I. Deferred Outflow at the beginning of the period	3,991,676
II. Deferred Outflow created during the period	2,033,342
III. Deferred Outflow recognized during the period	1,092,507
IV. Change in Deferred Outflow (II. - III.)	940,835
V. Deferred Outflow at end of the period (I. + IV.)	4,932,511
VI. Deferred Inflow at the beginning of the period	(10,918,349)
VII. Deferred Inflow created during the period	0
VIII. Deferred Inflow recognized during the period	(1,939,413)
IX. Change in Deferred Inflow (VII. - VIII.)	1,939,413
X. Deferred Inflow at end of the period (VI. + IX.)	(8,978,936)
Net OPEB Liability	
I. Net OPEB Liability at beginning of period	59,071,751
II. Service Cost	2,820,413
III. Interest on Total OPEB Liability, Service Cost, and Payments	1,834,977
IV. Projected Investment Income	(3,123)
V. Total Employer Contributions	(1,615,345)
VI. Expense Related to Change in Benefit Terms	0
VII. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V. + VI.)	3,036,922
VIII. Deferred Outflow created during the period	2,033,342
IX. Deferred Inflow created during the period	0
X. Net OPEB Liability at end of period (I. + VII. + VIII. + IX.)	64,142,015
Net OPEB Expense	
I. Service Cost	2,820,413
II. Interest on Total OPEB Liability, Service Cost, and Payments	1,834,977
III. Projected Investment Income	(3,123)
IV. Recognition of Deferred (Inflow)/Outflow	(846,906)
V. Expense Related to Change in Benefit Terms	0
VI. Financial Statement Expense (I. + II. + III. + IV. + V.)	3,805,361
VII. Benefit Payments	(1,605,345)
VIII. Contributions to Trust	(10,000)
IX. Total Employer Payments (VII. + VIII.)	(1,615,345)
X. Total Net OPEB Expense under GASB 75 (VI. + IX.)	2,190,016

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>	<u>June 30, 2018</u>	<u>For the Fiscal Year Ending: June 30, 2017</u>	<u>June 30, 2016</u>
I. Service Cost	2,820,413	2,508,172	2,704,845	2,554,321	2,617,379
II. 30 Year Level Dollar Amortization of NOL	<u>3,082,838</u>	<u>2,926,016</u>	<u>3,242,135</u>	<u>3,242,136</u>	<u>3,023,674</u>
III. Actuarial Determined Contribution [I. + II.]	5,903,251	5,434,188	5,946,980	5,796,457	5,641,053
IV. Contributions in Relation to the Actuarially Determined Contribution	<u>(1,615,345)</u>	<u>(1,609,022)</u>	<u>(1,438,388)</u>	<u>(1,343,091)</u>	<u>(1,154,083)</u>
V. Contribution Deficiency / (Excess) [III. + IV.]	<u>4,287,906</u>	<u>3,825,166</u>	<u>4,508,592</u>	<u>4,453,366</u>	<u>4,486,970</u>
Covered Employee Payroll	26,502,877	25,730,949	23,431,218	22,748,755	22,748,755
Contributions as a % of Covered Employee Payroll	6.09%	6.25%	6.32%	5.90%	5.07%
Discount Rate	2.75%	3.00%	3.00%	3.00%	3.00%
Money Weighted Rate of Return	2.41%	5.42%	N/A	N/A	N/A

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	June 30, 2016	June 30, 2016	June 30, 2016
GASB 75 Measurement Date	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016
For the Reporting Period & Fiscal Year Ending on:	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016
Total OPEB Liability	64,224,339	59,142,235	68,912,128	65,453,705	62,316,351
I. Service Cost	2,820,413	2,508,172	2,704,845	2,554,321	2,617,379
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	1,834,977	2,119,655	2,191,966	1,926,124	1,669,937
III. Changes in Benefit Terms	0	0	0	0	0
IV. Difference Between Expected & Actual Plan Experience	0	(6,792,252)	0	0	5,563,159
V. Changes of Assumptions	2,032,059	(6,063,816)	0	0	0
VI. Benefit Payments Excluding Implicit Cost	(1,273,476)	(1,209,620)	(1,346,429)	(1,260,567)	N/A
VII. Implicit Cost Amount	(331,869)	(332,032)	(91,959)	(82,524)	N/A
VIII. Total Benefit Payments Including Implicit Cost [VI.+VII.]	(1,605,345)	(1,541,652)	(1,438,388)	(1,343,091)	(1,154,083)
IX. Net Change in OPEB Liability [I.+II.+III.+IV.+V.+VIII.]	5,082,104	(9,769,893)	3,458,423	3,137,354	8,696,392
X. Total OPEB Liability - Beginning of Period	59,142,235	68,912,128	65,453,705	62,316,351	53,619,959
XI. Prior Period Adjustment	0	0	0	0	0
XII. Total OPEB Liability - Beginning of Period with Adjustment	59,142,235	68,912,128	65,453,705	62,316,351	53,619,959
XIII. Total OPEB Liability - End of Period [IX.+XII.]	64,224,339	59,142,235	68,912,128	65,453,705	62,316,351
Plan Fiduciary Net Position	82,324	70,484	0	0	0
XIV. Earning from Plan Investments	1,840	3,114	0	0	0
XV. Employer Contribution to Trust	1,615,345	1,551,652	1,438,388	1,343,091	1,154,083
XVI. Benefit Payments from Trust, Including Refunds of Member Contributions	(1,605,345)	(1,541,652)	(1,438,388)	(1,343,091)	(1,154,083)
XVII. Administrative Expense	0	0	0	0	0
XVIII. Other	0	0	0	0	0
XIX. Net Change in Plan Fiduciary Net Position [XIV.+XV.+XVI.+XVII.+XVIII.]	11,840	13,114	0	0	0
XX. Plan Fiduciary Net Position - Beginning of Period	70,484	0	0	0	0
XXI. Prior Period Adjustment	0	57,370	0	0	0
XXII. Plan Fiduciary Net Position - Beginning of Period with Adjustment	70,484	57,370	0	0	0
XXIII. Plan Fiduciary Net Position - End of Period [XIX.+XXII.]	82,324	70,484	0	0	0
XXIV. Net OPEB Liability [XIII.-XXIII.]	64,142,015	59,071,751	68,912,128	65,453,705	62,316,351
XXV. Plan Fiduciary Net Position as % of Total OPEB Liability [XXIII. / XIII.]	0.13%	0.12%	0.00%	0.00%	0.00%
XXVI. Covered Employee Payroll	26,502,877	25,730,949	23,431,218	22,748,755	22,748,755
XXVII. Plan NOL as % of Covered Employee Payroll [XXIV. / XXVI.]	242.02%	229.57%	294.10%	287.72%	273.93%
Single Discount Rate to calculate Plan Liabilities	2.75%	3.00%	3.00%	3.00%	3.00%

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, 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:	4.14%, 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:	2.75%, 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-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:	304
Active Employees:	<u>454</u>
Total:	758

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 3.00% to 2.75%

Contributions:

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town contributed \$10,000 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 \$1,605,345. \$331,869 of the \$1,605,345 represents implicit cost.

EXHIBIT B

REQUIRED 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 - 2.75% 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 4.14% 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	64,224,339	82,324	64,142,015	0.13%	2,820,413	1,605,345	10,000	1,615,345	1,605,345	0	10,000
2021	June 30, 2021	67,386,685	95,937	67,290,748	0.14%	2,977,467	1,689,132	10,000	1,699,132	1,689,132	0	10,000
2022	June 30, 2022	70,672,698	110,114	70,562,584	0.16%	3,143,793	1,784,744	10,000	1,794,744	1,784,744	0	10,000
2023	June 30, 2023	74,094,076	124,878	73,969,198	0.17%	3,308,894	1,895,223	10,000	1,905,223	1,895,223	0	10,000
2024	June 30, 2024	77,632,222	140,253	77,491,969	0.18%	3,464,390	2,017,725	10,000	2,027,725	2,017,725	0	10,000
2025	June 30, 2025	81,288,205	156,264	81,131,941	0.19%	3,633,787	2,150,233	10,000	2,160,233	2,150,233	0	10,000
2026	June 30, 2026	85,088,308	172,938	84,915,370	0.20%	3,800,008	2,263,328	10,000	2,273,328	2,263,328	0	10,000
2027	June 30, 2027	89,044,891	190,303	88,854,588	0.21%	3,974,524	2,387,654	10,000	2,397,654	2,387,654	0	10,000
2028	June 30, 2028	93,127,813	208,386	92,919,427	0.22%	4,156,536	2,534,077	10,000	2,544,077	2,534,077	0	10,000
2029	June 30, 2029	97,359,874	227,218	97,132,656	0.23%	4,343,379	2,652,786	10,000	2,662,786	2,652,786	0	10,000
2030	June 30, 2030	101,719,880	246,830	101,473,050	0.24%	4,507,070	2,777,407	10,000	2,787,407	2,777,407	0	10,000
2031	June 30, 2031	106,252,138	267,254	105,984,884	0.25%	4,713,753	2,951,611	10,000	2,961,611	2,951,611	0	10,000
2032	June 30, 2032	110,693,292	288,523	110,404,769	0.26%	4,923,912	3,108,582	10,000	3,118,582	3,108,582	0	10,000
2033	June 30, 2033	115,383,099	310,673	115,072,426	0.27%	5,129,883	3,231,983	10,000	3,241,983	3,231,983	0	10,000
2034	June 30, 2034	120,085,463	333,740	119,751,723	0.28%	5,359,826	3,442,557	10,000	3,452,557	3,442,557	0	10,000
2035	June 30, 2035	125,213,859	357,762	124,856,097	0.29%	5,599,250	3,601,661	10,000	3,611,661	3,601,661	0	10,000
2036	June 30, 2036	130,515,728	382,778	130,132,950	0.29%	5,851,556	3,719,109	10,000	3,729,109	3,719,109	0	10,000
2037	June 30, 2037	136,001,151	408,830	135,592,321	0.30%	6,113,135	3,879,776	10,000	3,889,776	3,879,776	0	10,000
2038	June 30, 2038	141,910,627	435,960	141,474,667	0.31%	6,389,436	4,039,461	10,000	4,049,461	4,039,461	0	10,000
2039	June 30, 2039	148,136,021	464,214	147,671,807	0.31%	6,690,673	4,171,060	10,000	4,181,060	4,171,060	0	10,000
2040	June 30, 2040	154,597,432	493,637	154,103,795	0.32%	6,980,894	4,299,110	10,000	4,309,110	4,299,110	0	10,000
2041	June 30, 2041	161,230,875	524,278	160,706,597	0.33%	7,300,996	4,532,742	10,000	4,542,742	4,532,742	0	10,000
2042	June 30, 2042	168,335,670	556,188	167,779,482	0.33%	7,643,517	4,732,217	10,000	4,742,217	4,732,217	0	10,000
2043	June 30, 2043	175,677,940	589,419	175,088,521	0.34%	8,013,830	4,949,408	10,000	4,959,408	4,949,408	0	10,000
2044	June 30, 2044	183,312,952	624,026	182,688,926	0.34%	8,398,483	5,210,589	10,000	5,220,589	5,210,589	0	10,000
2045	June 30, 2045	191,607,071	660,066	190,947,005	0.34%	8,798,076	5,391,869	10,000	5,401,869	5,391,869	0	10,000
2046	June 30, 2046	200,245,924	697,598	199,548,326	0.35%	9,232,793	5,619,387	10,000	5,629,387	5,619,387	0	10,000
2047	June 30, 2047	209,225,542	736,683	208,488,859	0.35%	9,677,554	5,863,158	10,000	5,873,158	5,863,158	0	10,000
2048	June 30, 2048	218,812,932	777,387	218,035,545	0.36%	10,138,841	6,068,606	10,000	6,078,606	6,068,606	0	10,000
2049	June 30, 2049	228,851,978	819,776	228,032,202	0.36%	10,637,671	6,321,541	10,000	6,331,541	6,321,541	0	10,000
2050	June 30, 2050	239,638,886	863,920	238,774,966	0.36%	11,143,444	6,559,025	10,000	6,569,025	6,559,025	0	10,000
2051	June 30, 2051	250,977,980	909,891	250,068,089	0.36%	11,695,093	6,844,473	10,000	6,854,473	6,844,473	0	10,000

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	26,502,877	0	26,502,877	0	1,605,345	0	1,605,345
June 30, 2021	24,361,057	2,936,906	27,297,963	0	1,689,132	0	1,689,132
June 30, 2022	22,762,412	5,354,490	28,116,902	0	1,784,744	0	1,784,744
June 30, 2023	21,495,821	7,464,588	28,960,409	0	1,895,223	0	1,895,223
June 30, 2024	20,479,875	9,349,346	29,829,221	0	2,017,725	0	2,017,725
June 30, 2025	19,546,810	11,177,288	30,724,098	0	2,150,233	0	2,150,233
June 30, 2026	18,713,242	12,932,579	31,645,821	0	2,263,328	0	2,263,328
June 30, 2027	17,862,828	14,732,368	32,595,196	0	2,387,654	0	2,387,654
June 30, 2028	17,038,999	16,534,053	33,573,052	0	2,534,077	0	2,534,077
June 30, 2029	16,305,931	18,274,313	34,580,244	0	2,652,786	0	2,652,786
June 30, 2030	15,583,358	20,034,293	35,617,651	0	2,755,499	21,908	2,777,407
June 30, 2031	14,765,334	21,920,847	36,686,181	0	2,895,871	55,740	2,951,611
June 30, 2032	14,019,969	23,766,797	37,786,766	0	3,005,496	103,086	3,108,582
June 30, 2033	13,375,604	25,544,765	38,920,369	0	3,067,293	164,690	3,231,983
June 30, 2034	12,648,891	27,439,089	40,087,980	0	3,204,856	237,701	3,442,557
June 30, 2035	11,925,398	29,365,221	41,290,619	0	3,303,329	298,332	3,601,661
June 30, 2036	11,226,695	31,302,643	42,529,338	0	3,351,777	367,332	3,719,109
June 30, 2037	10,550,930	33,254,288	43,805,218	0	3,435,411	444,365	3,879,776
June 30, 2038	9,848,546	35,270,829	45,119,375	0	3,526,085	513,376	4,039,461
June 30, 2039	9,152,024	37,320,932	46,472,956	0	3,581,486	589,574	4,171,060
June 30, 2040	8,600,928	39,266,217	47,867,145	0	3,607,761	691,349	4,299,110
June 30, 2041	7,993,197	41,309,962	49,303,159	0	3,707,907	824,835	4,532,742
June 30, 2042	7,410,416	43,371,838	50,782,254	0	3,743,888	988,329	4,732,217
June 30, 2043	6,831,211	45,474,511	52,305,722	0	3,765,244	1,184,164	4,949,408
June 30, 2044	6,293,876	47,581,018	53,874,894	0	3,802,540	1,408,049	5,210,589
June 30, 2045	5,812,462	49,678,679	55,491,141	0	3,778,863	1,613,006	5,391,869
June 30, 2046	5,320,740	51,835,135	57,155,875	0	3,782,157	1,837,230	5,619,387
June 30, 2047	4,927,794	53,942,757	58,870,551	0	3,780,294	2,082,864	5,863,158
June 30, 2048	4,537,193	56,099,475	60,636,668	0	3,752,159	2,316,447	6,068,606
June 30, 2049	4,080,675	58,375,093	62,455,768	0	3,754,316	2,567,225	6,321,541
June 30, 2050	3,696,524	60,632,917	64,329,441	0	3,711,191	2,847,834	6,559,025
June 30, 2051	3,292,074	62,967,250	66,259,324	0	3,690,368	3,154,105	6,844,473
June 30, 2052	2,924,628	65,322,476	68,247,104	0	3,746,505	3,485,473	7,231,978
June 30, 2053	2,627,145	67,667,372	70,294,517	0	3,729,628	3,844,240	7,573,868
June 30, 2054	2,286,155	70,117,198	72,403,353	0	3,741,441	4,231,752	7,973,193
June 30, 2055	1,969,639	72,605,815	74,575,454	0	3,740,677	4,629,715	8,370,392
June 30, 2056	1,632,196	75,180,522	76,812,718	0	3,680,480	5,051,375	8,731,855
June 30, 2057	1,335,493	77,781,607	79,117,100	0	3,634,846	5,500,716	9,135,562
June 30, 2058	1,107,099	80,383,514	81,490,613	0	3,554,374	5,967,597	9,521,971
June 30, 2059	854,864	83,080,467	83,935,331	0	3,459,972	6,457,284	9,917,256

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	678,222	85,775,169	86,453,391	0	3,362,388	6,978,730	10,341,118
June 30, 2061	516,542	88,530,451	89,046,993	0	3,283,801	7,529,398	10,813,199
June 30, 2062	342,655	91,375,748	91,718,403	0	3,199,134	8,111,048	11,310,182
June 30, 2063	231,865	94,238,090	94,469,955	0	3,111,025	8,726,613	11,837,638
June 30, 2064	142,166	97,161,888	97,304,054	0	3,038,796	9,376,491	12,415,287
June 30, 2065	67,752	100,155,424	100,223,176	0	2,959,856	10,054,605	13,014,461
June 30, 2066	30,044	103,199,827	103,229,871	0	2,875,182	10,764,812	13,639,994
June 30, 2067	12,055	106,314,712	106,326,767	0	2,786,774	11,509,195	14,295,969
June 30, 2068	0	109,516,570	109,516,570	0	2,693,635	12,280,687	14,974,322
June 30, 2069	0	112,802,067	112,802,067	0	2,597,691	13,084,941	15,682,632
June 30, 2070	0	116,186,129	116,186,129	0	2,499,074	13,924,460	16,423,534
June 30, 2071	0	119,671,713	119,671,713	0	2,398,182	14,797,876	17,196,058
June 30, 2072	0	123,261,864	123,261,864	0	2,295,007	15,710,239	18,005,246
June 30, 2073	0	126,959,720	126,959,720	0	2,190,111	16,662,610	18,852,721
June 30, 2074	0	130,768,512	130,768,512	0	2,083,861	17,653,748	19,737,609
June 30, 2075	0	134,691,567	134,691,567	0	1,976,371	18,689,550	20,665,921
June 30, 2076	0	138,732,314	138,732,314	0	1,868,375	19,766,550	21,634,925
June 30, 2077	0	142,894,283	142,894,283	0	1,759,887	20,886,754	22,646,641
June 30, 2078	0	147,181,111	147,181,111	0	1,651,509	22,053,814	23,705,323
June 30, 2079	0	151,596,544	151,596,544	0	1,543,676	23,265,845	24,809,521
June 30, 2080	0	156,144,440	156,144,440	0	1,436,583	24,527,167	25,963,750
June 30, 2081	0	160,828,773	160,828,773	0	1,330,551	25,839,936	27,170,487
June 30, 2082	0	165,653,636	165,653,636	0	1,225,868	27,208,227	28,434,095
June 30, 2083	0	170,623,245	170,623,245	0	1,122,537	28,636,516	29,759,053
June 30, 2084	0	175,741,942	175,741,942	0	1,021,374	30,124,815	31,146,189
June 30, 2085	0	181,014,200	181,014,200	0	922,510	31,679,847	32,602,357
June 30, 2086	0	186,444,626	186,444,626	0	826,304	33,302,391	34,128,695
June 30, 2087	0	192,037,965	192,037,965	0	733,858	34,994,113	35,727,971
June 30, 2088	0	197,799,104	197,799,104	0	645,158	36,761,560	37,406,718
June 30, 2089	0	203,733,077	203,733,077	0	562,264	38,606,071	39,168,335
June 30, 2090	0	209,845,069	209,845,069	0	486,853	40,531,392	41,018,245
June 30, 2091	0	216,140,421	216,140,421	0	417,195	42,543,216	42,960,411
June 30, 2092	0	222,624,634	222,624,634	0	353,044	44,646,314	44,999,358
June 30, 2093	0	229,303,373	229,303,373	0	295,176	46,845,069	47,140,245
June 30, 2094	0	236,182,474	236,182,474	0	243,796	49,143,428	49,387,224

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	70,484	1,605,345	10,000	1,615,345	0	1,605,345	1,605,345	1,840	82,324
June 30, 2021	82,324	1,689,132	8,924	1,698,056	0	1,689,132	1,689,132	3,224	94,472
June 30, 2022	94,472	1,784,744	8,096	1,792,840	0	1,784,744	1,784,744	4,077	106,645
June 30, 2023	106,645	1,895,223	7,422	1,902,645	0	1,895,223	1,895,223	4,567	118,634
June 30, 2024	118,634	2,017,725	6,866	2,024,591	0	2,017,725	2,017,725	5,052	130,552
June 30, 2025	130,552	2,150,233	6,362	2,156,595	0	2,150,233	2,150,233	5,535	142,449
June 30, 2026	142,449	2,263,328	5,913	2,269,241	0	2,263,328	2,263,328	6,019	154,381
June 30, 2027	154,381	2,387,654	5,480	2,393,134	0	2,387,654	2,387,654	6,504	166,365
June 30, 2028	166,365	2,534,077	5,075	2,539,152	0	2,534,077	2,534,077	6,991	178,431
June 30, 2029	178,431	2,652,786	4,715	2,657,501	0	2,652,786	2,652,786	7,484	190,630
June 30, 2030	190,630	2,755,499	4,375	2,759,874	0	2,755,499	2,755,499	7,982	181,079
June 30, 2031	181,079	2,895,871	4,025	2,899,896	0	2,895,871	2,895,871	7,579	136,943
June 30, 2032	136,943	3,005,496	3,710	3,009,206	0	3,005,496	3,005,496	5,745	43,312
June 30, 2033	43,312	3,067,293	3,437	3,070,730	0	3,067,293	3,067,293	1,864	5,301
June 30, 2034	5,301	3,204,856	3,155	3,208,011	0	3,204,856	3,204,856	284	3,439
June 30, 2035	3,439	3,303,329	2,888	3,306,217	0	3,303,329	3,303,329	202	3,090
June 30, 2036	3,090	3,351,777	2,640	3,354,417	0	3,351,777	3,351,777	182	2,822
June 30, 2037	2,822	3,435,411	2,409	3,437,820	0	3,435,411	3,435,411	166	2,575
June 30, 2038	2,575	3,526,085	2,183	3,528,268	0	3,526,085	3,526,085	151	2,334
June 30, 2039	2,334	3,581,486	1,969	3,583,455	0	3,581,486	3,581,486	137	2,106
June 30, 2040	2,106	3,607,761	1,797	3,609,558	0	3,607,761	3,607,761	124	1,921
June 30, 2041	1,921	3,707,907	1,621	3,709,528	0	3,707,907	3,707,907	113	1,734
June 30, 2042	1,734	3,743,888	1,459	3,745,347	0	3,743,888	3,743,888	102	1,561
June 30, 2043	1,561	3,765,244	1,306	3,766,550	0	3,765,244	3,765,244	91	1,397
June 30, 2044	1,397	3,802,540	1,168	3,803,708	0	3,802,540	3,802,540	82	1,250
June 30, 2045	1,250	3,778,863	1,047	3,779,910	0	3,778,863	3,778,863	73	1,120
June 30, 2046	1,120	3,782,157	931	3,783,088	0	3,782,157	3,782,157	65	996
June 30, 2047	996	3,780,294	837	3,781,131	0	3,780,294	3,780,294	58	895
June 30, 2048	895	3,752,159	748	3,752,907	0	3,752,159	3,752,159	52	800
June 30, 2049	800	3,754,316	653	3,754,969	0	3,754,316	3,754,316	47	700
June 30, 2050	700	3,711,191	575	3,711,766	0	3,711,191	3,711,191	41	616
June 30, 2051	616	3,690,368	497	3,690,865	0	3,690,368	3,690,368	36	533
June 30, 2052	533	3,746,505	429	3,746,934	0	3,746,505	3,746,505	31	460
June 30, 2053	460	3,729,628	374	3,730,002	0	3,729,628	3,729,628	27	401
June 30, 2054	401	3,741,441	316	3,741,757	0	3,741,441	3,741,441	23	339
June 30, 2055	339	3,740,677	264	3,740,941	0	3,740,677	3,740,677	19	283
June 30, 2056	283	3,680,480	212	3,680,692	0	3,680,480	3,680,480	16	228
June 30, 2057	228	3,634,846	169	3,635,015	0	3,634,846	3,634,846	13	182
June 30, 2058	182	3,554,374	136	3,554,510	0	3,554,374	3,554,374	10	146
June 30, 2059	146	3,459,972	102	3,460,074	0	3,459,972	3,459,972	8	110

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	110	3,362,388	78	3,362,466	0	3,362,388	3,362,388	6	84
June 30, 2061	84	3,283,801	58	3,283,859	0	3,283,801	3,283,801	5	63
June 30, 2062	63	3,199,134	37	3,199,171	0	3,199,134	3,199,134	3	40
June 30, 2063	40	3,111,025	25	3,111,050	0	3,111,025	3,111,025	2	27
June 30, 2064	27	3,038,796	15	3,038,811	0	3,038,796	3,038,796	1	16
June 30, 2065	16	2,959,856	7	2,959,863	0	2,959,856	2,959,856	1	8
June 30, 2066	8	2,875,182	3	2,875,185	0	2,875,182	2,875,182	0	3
June 30, 2067	3	2,786,774	1	2,786,775	0	2,786,774	2,786,774	0	1
June 30, 2068	1	2,693,635	0	2,693,635	0	2,693,635	2,693,635	0	0
June 30, 2069	0	2,597,691	0	2,597,691	0	2,597,691	2,597,691	0	0
June 30, 2070	0	2,499,074	0	2,499,074	0	2,499,074	2,499,074	0	0
June 30, 2071	0	2,398,182	0	2,398,182	0	2,398,182	2,398,182	0	0
June 30, 2072	0	2,295,007	0	2,295,007	0	2,295,007	2,295,007	0	0
June 30, 2073	0	2,190,111	0	2,190,111	0	2,190,111	2,190,111	0	0
June 30, 2074	0	2,083,861	0	2,083,861	0	2,083,861	2,083,861	0	0
June 30, 2075	0	1,976,371	0	1,976,371	0	1,976,371	1,976,371	0	0
June 30, 2076	0	1,868,375	0	1,868,375	0	1,868,375	1,868,375	0	0
June 30, 2077	0	1,759,887	0	1,759,887	0	1,759,887	1,759,887	0	0
June 30, 2078	0	1,651,509	0	1,651,509	0	1,651,509	1,651,509	0	0
June 30, 2079	0	1,543,676	0	1,543,676	0	1,543,676	1,543,676	0	0
June 30, 2080	0	1,436,583	0	1,436,583	0	1,436,583	1,436,583	0	0
June 30, 2081	0	1,330,551	0	1,330,551	0	1,330,551	1,330,551	0	0
June 30, 2082	0	1,225,868	0	1,225,868	0	1,225,868	1,225,868	0	0
June 30, 2083	0	1,122,537	0	1,122,537	0	1,122,537	1,122,537	0	0
June 30, 2084	0	1,021,374	0	1,021,374	0	1,021,374	1,021,374	0	0
June 30, 2085	0	922,510	0	922,510	0	922,510	922,510	0	0
June 30, 2086	0	826,304	0	826,304	0	826,304	826,304	0	0
June 30, 2087	0	733,858	0	733,858	0	733,858	733,858	0	0
June 30, 2088	0	645,158	0	645,158	0	645,158	645,158	0	0
June 30, 2089	0	562,264	0	562,264	0	562,264	562,264	0	0
June 30, 2090	0	486,853	0	486,853	0	486,853	486,853	0	0
June 30, 2091	0	417,195	0	417,195	0	417,195	417,195	0	0
June 30, 2092	0	353,044	0	353,044	0	353,044	353,044	0	0
June 30, 2093	0	295,176	0	295,176	0	295,176	295,176	0	0
June 30, 2094	0	243,796	0	243,796	0	243,796	243,796	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 [4.14%]	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 [2.67%]	
June 30, 2020	70,484	1,605,345	70,484	1,534,861	70,484	1,534,861	1,605,345	Sum of Column V.
June 30, 2021	82,324	1,689,132	82,324	1,606,808	79,051	1,645,257	1,645,257	1,379,840
June 30, 2022	94,472	1,784,744	94,472	1,690,272	87,110	1,603,807	1,693,230	
June 30, 2023	106,645	1,895,223	106,645	1,788,578	94,425	1,653,107	1,751,340	Sum of Column VI.
June 30, 2024	118,634	2,017,725	118,634	1,899,091	100,865	1,709,766	1,816,110	89,991,453
June 30, 2025	130,552	2,150,233	130,552	2,019,681	106,585	1,771,216	1,885,106	
June 30, 2026	142,449	2,263,328	142,449	2,120,879	111,674	1,811,767	1,932,715	Sum of Column VII.
June 30, 2027	154,381	2,387,654	154,381	2,233,273	116,217	1,858,343	1,985,920	[V. + VI.]
June 30, 2028	166,365	2,534,077	166,365	2,367,712	120,260	1,919,158	2,052,959	91,371,293
June 30, 2029	178,431	2,652,786	178,431	2,474,355	123,855	1,953,627	2,093,306	
June 30, 2030	190,630	2,755,499	190,630	2,564,869	127,062	1,972,616	2,117,877	
June 30, 2031	181,079	2,895,871	181,079	2,714,792	115,898	2,033,816	2,167,953	
June 30, 2032	136,943	3,005,496	136,943	2,868,553	84,165	2,093,320	2,191,577	
June 30, 2033	43,312	3,067,293	43,312	3,023,981	25,561	2,149,560	2,178,542	
June 30, 2034	5,301	3,204,856	5,301	3,199,555	3,004	2,215,429	2,217,120	
June 30, 2035	3,439	3,303,329	3,439	3,299,890	1,871	2,225,694	2,225,885	
June 30, 2036	3,090	3,351,777	3,090	3,348,687	1,615	2,200,079	2,199,865	
June 30, 2037	2,822	3,435,411	2,822	3,432,589	1,416	2,196,763	2,196,189	
June 30, 2038	2,575	3,526,085	2,575	3,523,510	1,241	2,196,517	2,195,603	
June 30, 2039	2,334	3,581,486	2,334	3,579,152	1,080	2,173,387	2,172,172	
June 30, 2040	2,106	3,607,761	2,106	3,605,655	936	2,132,744	2,131,272	
June 30, 2041	1,921	3,707,907	1,921	3,705,986	820	2,135,286	2,133,536	
June 30, 2042	1,734	3,743,888	1,734	3,742,154	710	2,100,254	2,098,283	
June 30, 2043	1,561	3,765,244	1,561	3,763,683	614	2,057,599	2,055,438	
June 30, 2044	1,397	3,802,540	1,397	3,801,143	528	2,024,229	2,021,879	
June 30, 2045	1,250	3,778,863	1,250	3,777,613	453	1,959,570	1,957,098	
June 30, 2046	1,120	3,782,157	1,120	3,781,037	390	1,910,521	1,907,923	
June 30, 2047	996	3,780,294	996	3,779,298	333	1,860,158	1,857,450	
June 30, 2048	895	3,752,159	895	3,751,264	287	1,798,515	1,795,737	
June 30, 2049	800	3,754,316	800	3,753,516	247	1,752,962	1,750,098	
June 30, 2050	700	3,711,191	700	3,710,491	207	1,687,964	1,685,058	
June 30, 2051	616	3,690,368	616	3,689,752	175	1,635,034	1,632,080	
June 30, 2052	533	3,746,505	533	3,745,972	146	1,616,933	1,613,868	
June 30, 2053	460	3,729,628	460	3,729,168	121	1,567,967	1,564,867	
June 30, 2054	401	3,741,441	401	3,741,040	101	1,532,199	1,529,047	
June 30, 2055	339	3,740,677	339	3,740,338	82	1,492,215	1,489,025	
June 30, 2056	283	3,680,480	283	3,680,197	66	1,430,176	1,427,008	
June 30, 2057	228	3,634,846	228	3,634,618	51	1,375,862	1,372,708	
June 30, 2058	182	3,554,374	182	3,554,192	39	1,310,553	1,307,450	
June 30, 2059	146	3,459,972	146	3,459,826	30	1,242,698	1,239,666	

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 [4.14%]	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 [2.67%]
June 30, 2060	110	3,362,388	110	3,362,278	22	1,176,367	1,173,411
June 30, 2061	84	3,283,801	84	3,283,717	16	1,119,110	1,116,218
June 30, 2062	63	3,199,134	63	3,199,071	11	1,062,010	1,059,192
June 30, 2063	40	3,111,025	40	3,110,985	7	1,006,005	1,003,265
June 30, 2064	27	3,038,796	27	3,038,769	5	957,189	954,518
June 30, 2065	16	2,959,856	16	2,959,840	3	908,168	905,572
June 30, 2066	8	2,875,182	8	2,875,174	1	859,330	856,817
June 30, 2067	3	2,786,774	3	2,786,771	0	811,325	808,899
June 30, 2068	1	2,693,635	1	2,693,634	0	763,888	761,555
June 30, 2069	0	2,597,691	0	2,597,691	0	717,590	715,353
June 30, 2070	0	2,499,074	0	2,499,074	0	672,459	670,319
June 30, 2071	0	2,398,182	0	2,398,182	0	628,588	626,549
June 30, 2072	0	2,295,007	0	2,295,007	0	585,957	584,019
June 30, 2073	0	2,190,111	0	2,190,111	0	544,686	542,849
June 30, 2074	0	2,083,861	0	2,083,861	0	504,831	503,097
June 30, 2075	0	1,976,371	0	1,976,371	0	466,384	464,752
June 30, 2076	0	1,868,375	0	1,868,375	0	429,474	427,944
June 30, 2077	0	1,759,887	0	1,759,887	0	394,054	392,625
June 30, 2078	0	1,651,509	0	1,651,509	0	360,205	358,876
June 30, 2079	0	1,543,676	0	1,543,676	0	327,961	326,730
June 30, 2080	0	1,436,583	0	1,436,583	0	297,300	296,165
June 30, 2081	0	1,330,551	0	1,330,551	0	268,221	267,181
June 30, 2082	0	1,225,868	0	1,225,868	0	240,715	239,766
June 30, 2083	0	1,122,537	0	1,122,537	0	214,713	213,852
June 30, 2084	0	1,021,374	0	1,021,374	0	190,300	189,526
June 30, 2085	0	922,510	0	922,510	0	167,426	166,734
June 30, 2086	0	826,304	0	826,304	0	146,080	145,467
June 30, 2087	0	733,858	0	733,858	0	126,375	125,836
June 30, 2088	0	645,158	0	645,158	0	108,221	107,753
June 30, 2089	0	562,264	0	562,264	0	91,872	91,469
June 30, 2090	0	486,853	0	486,853	0	77,489	77,144
June 30, 2091	0	417,195	0	417,195	0	64,681	64,389
June 30, 2092	0	353,044	0	353,044	0	53,317	53,073
June 30, 2093	0	295,176	0	295,176	0	43,423	43,221
June 30, 2094	0	243,796	0	243,796	0	34,935	34,770

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, 2017
<u>Plan Year</u>	July 1 through June 30.
<u>Premium Effective Date</u>	Medicare Supplement Plans: effective January 1, 2019 Non-Medicare Plans: effective July 1, 2018 Dental Plans: effective July 1, 2018
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Benefits Offered</u>	Comprehensive Medical, Dental & \$5,000 of Life Insurance offered through the Group Insurance Commission.
<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"> • 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

Participant Contributions

Group	Individual	Two-Person / Family
Medical	<ul style="list-style-type: none"> • 40% of premiums for Harvard Pilgrim Independence, Tufts Navigator, UniCare Choice or UniCare PLUS plans • 50% of premiums for UniCare Basic (with or without CIC) plans • 30% for all other plans 	<ul style="list-style-type: none"> • 40% of premiums for Harvard Pilgrim Independence, Tufts Navigator, UniCare Choice or UniCare PLUS plans • 50% of premiums for UniCare Basic (with or without CIC) plans • 30% for all other plans
Dental	50%	50%
Life	50%	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

2.75% per annum (previously 3.00%, used in the calculation of the Interest Cost)

Net Long Term Rate of Return

4.14% (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 Service (Males)	0-4 Years of Service (Females)	5-9 Years of Service (Males)	5-9 Years of Service (Females)	10+ Years of Service (Males)	10+ Years 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 & 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%.

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.

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	64,224,339	59,142,235
II. Total OPEB Liability (Excluding Implicit Subsidy)	<u>55,310,887</u>	<u>50,689,839</u>
III. Liability from Implicit Subsidy [I. - II.]	8,913,452	8,452,396

	For the Measurement Period Ending	
Impact on Payments	<u>June 30, 2020</u>	<u>June 30, 2019</u>
IV. Employer Payments (Including Implicit Subsidy)	1,605,345	1,541,652
V. Actual Employer Payments	<u>1,273,476</u>	<u>1,209,620</u>
VI. Implicit Subsidy [IV. - V.]	331,869	332,032

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	3,376	2,128	44 & Under	6,635	4,348	65 to 69	4,565	4,565
25 to 29	4,980	2,214	45 to 49	7,288	5,490	70 to 74	4,565	4,565
30 to 34	6,293	2,779	50 to 54	8,574	7,230	75 to 79	4,565	4,565
35 to 39	6,483	3,490	55 to 59	9,911	9,399	80 to 84	4,565	4,565
40 to 44	6,635	4,348	60 to 64	11,794	12,062	85 to 89	4,565	4,565
45 to 49	7,288	5,490	65 to 69	14,138	15,045	90 & Over	4,565	4,565
50 to 54	8,574	7,230	70 to 74	16,672	18,030			
55 to 59	9,911	9,399	75 to 79	19,362	21,294			
60 to 64	11,794	12,062	80 to 84	22,200	24,476			
65 to 69	14,138	15,045	85 to 89	25,341	28,016			
70 & Over	16,672	18,030	90 & Over	25,341	28,016			

*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	34.42
B. Average Service	<u>8.42</u>
C. Average Current Age	42.84

Retired Employees & Spouses

Valuation Date	July 1, 2018
A. Under Age 65	60
B. Age 65 & Over	<u>244</u>
C. Total	304

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	23									23
25-29	64	4								68
30-34	32	12	6							50
35-39	30	7	12	7						56
40-44	19	6	12	9	3					49
45-49	30	12	6	6	11	1				66
50-54	20	9	11	8	9	2	3			62
55-59	8	4	14	12	5		4	1		48
60-64	5	2	3	5	6	1	3			25
65-69	2	1					1			4
70+		1	1	1						3
Total	233	58	65	48	34	4	11	1		454

APPENDIX IV - PLAN DEMOGRAPHICS

<u>Plan Offerings</u>	<u>Number of Contracts</u>			
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
Fallon Direct	21		8	29
Fallon Select	3		8	11
Harvard Pilgrim Independence	22		2	24
Harvard Primary Choice	19		30	49
Allways Health Partners			22	22
Tufts Navigator	8		25	33
Tufts Spirit	25		15	40
Unicare Basic w/ CIC	4			4
Unicare Comm Choice	29		58	87
Unicare Plus	6		3	9
Unicare OME w/ CIC	58	53		111
Tufts Medicare Complement	2	5		7
Tufts Medicare Preferred	4	1		5
Harvard Senior	24	16		40
Total	225	75	171	471

	<u>Per Contract Costs (monthly)</u>		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Fallon Direct	600.67		1,514.23
Fallon Select	811.80		1,971.90
Harvard Pilgrim Independence	889.65		2,171.50
Harvard Primary Choice	645.80		1,646.47
Allways Health Partners	646.93		1,677.70
Tufts Navigator	747.75		1,822.08
Tufts Spirit	565.90		1,358.93
Unicare Basic w/ CIC	1,060.77		2,347.90
Unicare Comm Choice	517.50		1,276.95
Unicare Plus	696.10		1,654.60
Unicare OME w/ CIC	379.49	758.98	
Tufts Medicare Complement	371.50	743.00	
Tufts Medicare Preferred	322.43	644.86	
Harvard Senior	391.13	782.26	
Dental Plan	45.36		118.26

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.