

Town of Holliston Other Postemployment Benefits Plan

GASB 74 & GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2019

As of the Measurement Date:
June 30, 2020

For the Reporting Date:
June 30, 2020

Delivered November 13, 2020



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November 13, 2020

Personal and Confidential

Ms. Mary Bousquet
Treasurer/Collector
Town of Holliston
703 Washington Street
Holliston, MA 01746

Dear Ms. Bousquet:

We have performed an actuarial valuation of the Town of Holliston Other Postemployment Benefits Plan for the Reporting Date & fiscal year ending June 30, 2020 with a Measurement Date of June 30, 2020 and a Valuation Date of July 1, 2019. The figures presented in this report reflect the adoption, by the Town of Holliston, 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

November 13, 2020

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Holliston other postemployment benefit programs with a Valuation Date of July 1, 2019 with a Measurement Date of June 30, 2020 for the Reporting Date & fiscal year ending June 30, 2020 in accordance with Government Account Standards Board Statement No. 74 & 75 and Actuarial Standards of Practice as issued by the American Academy of Actuaries. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Numbers 74 & 75 for the determination of the liability for postemployment benefits other than pensions.

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

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

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

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

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

A handwritten signature in black ink, appearing to read 'Andrew D. Taggart', written over a horizontal line.

Andrew D. Taggart, ASA, MAAA
Consulting Actuary

EXECUTIVE SUMMARY

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

Plan Experience

For the year ending on the Measurement Date of June 30, 2020, experience was largely in line with expectation, with experience loss of \$588,827 or 1.55% of the beginning Total OPEB Liability ("TOL"). This was mainly due to an increase in active employees as well as the average Active plan premium increasing by 16% rather than the expected 10% increase. This was mostly offset by fewer retirees than expected as well as the average Medicare Supplement plan premium increasing by 4% rather than the expected 10% increase.

Assumption Changes

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

- ✓ Based on recommendations by PERAC, the mortality table has been updated from the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 to the RP-2014 Mortality Table projected generationally with scale MP-2016 for males and females increasing the disclosed liability by \$1.5 million.
- ✓ The expected long-term medical trend has been updated to 4.50% decreasing the disclosed liability by \$2.8 million.
- ✓ Based on recent research by the Society of Actuaries, we have updated the assumption for morbidity or age-related costs of medical care increasing the disclosed liability by \$6.3 million.
- ✓ Assumption changes caused Service Cost to increase by \$76 thousand.

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

Investment Experience

- ✓ During the period there was an investment loss of \$731,844 due to asset performance below the expected rate of return.

Changes in Benefits Terms

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

EXECUTIVE SUMMARY

Recognition Period

- ✓ Changes in assumptions & plan experience are amortized into the net OPEB expense over 6.76 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 \$15,469,023 of OPEB assets as of June 30, 2020.
- ✓ Funding Policy - The Town is expected to contribute \$1,500,000 annually.
- ✓ Investment Policy - The Town is expected to earn 7.01% on assets based on its investment policy.

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare supplement) plans - represent 68.39% 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 (7.00%) – 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

EXECUTIVE SUMMARY

Medicare Buy-In

Recently, some of our clients have seen substantial cost savings by “buying into” Medicare for retirees who would otherwise be ineligible. To buy into Medicare the Town would need to pay the Medicare Part A premium and the Medicare Part A and B penalties. While the cost to buy into Medicare is significant, it is likely still far less than the cost of the claims that the associated 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 17 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.

I. Number of Retirees and Spouses Over 65 in Active Plans	17
II. Current Liability for Retirees and Spouses Over 65 in Active Plans	5,299,000
III. Potential Liability in Medicare Supplement Plan*	511,000
IV. Potential Reduction in Liability [II. - III.]	4,788,000

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

EXECUTIVE SUMMARY

Key Plan Metrics

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

Representative Plan Statistics		
Valuation Date	July 1, 2019	July 1, 2017
Measurement Date & Period Ending	June 30, 2020	June 30, 2019
Reporting Date/Fiscal Year End	June 30, 2020	June 30, 2019
Total OPEB Liability	45,330,703	38,098,308
Per Eligible Active Plan Participant	39,915	33,329
Per Retiree/Spouse Plan Participant	54,559	49,547
Total Annual Service Cost (Annual Benefit Accrual)	1,164,959	1,018,155
Per Eligible Active Plan Participant	1,882	1,700
Expected Employer Share of Retiree Costs	2,157,049	1,623,419
Per Retiree/Spouse Plan Participant	5,706	4,436
Net OPEB Liability as a % of Covered Payroll	76.70%	69.30%

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	378	45,330,703	45,330,703	2,157,049	2,157,049
June 30, 2025	459	55,215,402	47,629,291	2,931,413	2,528,663
June 30, 2030	496	65,629,966	48,834,858	3,834,246	2,853,039
June 30, 2035	504	76,841,137	49,321,402	4,441,313	2,850,710
June 30, 2040	501	90,082,969	49,876,756	5,208,974	2,884,083
June 30, 2045	492	107,230,794	51,214,024	5,818,275	2,778,841
June 30, 2050	484	129,741,687	53,451,857	6,697,821	2,759,414

PRINCIPAL RESULTS OF THE VALUATION

Town of Holliston

Assuming Funding - 7.00% discount rate

Comparison of Plan Liabilities to Prior Valuation

Valuation Date	July 1, 2019	July 1, 2017
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	24,707,316	19,964,088
B. Retirees/Disabled	<u>20,623,387</u>	<u>18,134,220</u>
C. Total	45,330,703	38,098,308
II. Fiduciary Net Position [Plan Assets]	15,469,023	13,689,545
III. Net OPEB Liability (Asset) [I. - II.]	29,861,680	24,408,763
IV. Funded Ratio [II. / I.]	34.12%	35.93%
V. Number of Eligible Participants		
A. Actives	619	599
B. Retirees/Disabled & Dependents	<u>378</u>	<u>366</u>
C. Total	997	965
VI. Service Cost	1,164,959	1,018,155
VII. Financial Statement Expense	4,319,232	3,232,426
VIII. Employer Contribution to the OPEB Trust	(1,500,000)	(1,500,000)
IX. Deferred Inflow of Resources	(159,438)	(231,063)
X. Deferred Outflow of Resources	7,186,576	2,467,467
XI. Money Weighted Rate of Return	1.90%	5.61%
XII. 20-year Municipal Bond Rate (SAPIHG)	2.66%	2.79%
XIII. Expected Long Term Rate of Return (Net of Expense)	7.01%	7.01%
XIV. Crossover Year	N/A	N/A
XV. Discount Rate	7.00%	7.00%

PRINCIPAL RESULTS OF THE VALUATION

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

	Town Employees and Retirees	School Employees and Retirees	Public Safety Employees and Retirees	Water Enterprise Employees and Retirees	Total
I. Total OPEB Liability					
A. Actives	1,404,430	18,147,979	4,828,775	326,132	24,707,316
B. Retirees/Disabled	<u>4,389,778</u>	<u>15,331,674</u>	<u>706,163</u>	<u>195,772</u>	<u>20,623,387</u>
C. Total	5,794,208	33,479,653	5,534,938	521,904	45,330,703
II. Fiduciary Net Position [Plan Assets]	1,977,263	11,424,873	1,888,788	178,099	15,469,023
III. Net OPEB Liability (Asset) [I. - II.]	3,816,945	22,054,780	3,646,150	343,805	29,861,680
IV. Number of Eligible Participants					
A. Actives	50	447	113	9	619
B. Retirees/Disabled	<u>84</u>	<u>281</u>	<u>7</u>	<u>6</u>	<u>378</u>
C. Total	134	728	120	15	997
For the Reporting Date and Fiscal Year Ending June 30, 2020					
V. Service Cost	74,396	846,479	227,690	16,394	1,164,959
VI. Financial Statement Expense	468,075	3,176,239	621,941	52,977	4,319,232
VII. Employer Share of Costs	(445,195)	(1,561,005)	(128,986)	(21,863)	(2,157,049)
VIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(183,212)	(1,108,481)	(190,829)	(17,478)	(1,500,000)
IX. Total Employer Contribution [VII. + VIII.]	(628,407)	(2,669,486)	(319,815)	(39,341)	(3,657,049)

PRINCIPAL RESULTS OF THE VALUATION

Town of Holliston

Assuming Funding - 7.00% 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	
Present Value of Future Benefits							
A. Participants	9,792,440	12,220,400	22,012,840	1,888,745	14,542,510	16,431,255	38,444,095
B. Spouses	<u>5,141,238</u>	<u>6,598,873</u>	<u>11,740,111</u>	<u>1,213,762</u>	<u>2,978,370</u>	<u>4,192,132</u>	<u>15,932,243</u>
C. Total	14,933,678	18,819,273	33,752,951	3,102,507	17,520,880	20,623,387	54,376,338
Total OPEB Liability							
A. Participants	7,342,915	8,761,144	16,104,059	1,888,745	14,542,510	16,431,255	32,535,314
B. Spouses	<u>3,881,841</u>	<u>4,721,416</u>	<u>8,603,257</u>	<u>1,213,762</u>	<u>2,978,370</u>	<u>4,192,132</u>	<u>12,795,389</u>
C. Total	11,224,756	13,482,560	24,707,316	3,102,507	17,520,880	20,623,387	45,330,703
Service Cost							
A. Participants	308,076	455,526	763,602	0	0	0	763,602
B. Spouses	<u>156,965</u>	<u>244,392</u>	<u>401,357</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>401,357</u>
C. Total	465,041	699,918	1,164,959	0	0	0	1,164,959

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	1,164,959
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	2,674,209
III. Deferred (Inflows)/Outflows from Plan Experience*	73,029
IV. Deferred (Inflows)/Outflows from Changes of Assumptions*	1,301,136
V. Projected Earnings on OPEB Plan Investments	(1,011,322)
VI. Deferred (Inflows)/Outflows from Earnings on Plan Investments**	117,221
VII. Financial Statement Expense Prior to Plan Design Changes [I. + II.+ III. + IV. + V. + VI.]	4,319,232
VIII. Expense Related to Change in Benefit Terms***	0
IX. Financial Statement Expense [VII. + VIII.]	4,319,232

* Amortized over 6.76 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	38,098,308	13,689,545	24,408,763
II. Prior Period Adjustment	0	0	0
III. Balances for June 30, 2019 with Adjustment [I. + II.]	38,098,308	13,689,545	24,408,763
Changes for the year:			
IV. Service Cost	1,164,959	0	1,164,959
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	2,674,209	0	2,674,209
VI. Changes in Benefit Terms *	0	0	0
VII. Change in Assumptions **	4,961,449	0	4,961,449
VIII. Differences Between Actual and Expected Experience **	588,827	0	588,827
IX. Net Investment Income	0	279,478	(279,478)
X. Employer Contributions to Trust	0	3,657,049	(3,657,049)
XI. Benefit Payments Withdrawn from Trust	0	(2,157,049)	2,157,049
XII. Benefit Payments Excluding Implicit Cost	(1,530,100)	0	(1,530,100)
XIII. Implicit Cost Amount	(626,949)	0	(626,949)
XIV. Total Benefit Payments Including Implicit Cost [XII. + XIII.]	(2,157,049)	0	(2,157,049)
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.]	7,232,395	1,779,478	5,452,917
XVIII. Balances at June 30, 2020 [III.+XVII.]	45,330,703	15,469,023	29,861,680

* Recognized Immediately

** Amortized over 6.76 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

3. Changes in Net OPEB Expense

Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Differences Between Expected & Actual Experience									
Fiscal	Differences Between Actual & Expected Experience	Recognition Period (Years)	Remaining Balance	2020	2021	2022	2023	2024	2025
2017									
2018	(86,562)	6.15	(44,337)	(14,075)	(14,075)	(14,075)	(14,075)	(2,112)	
2019	0	6.15	0	0	0	0	0	0	0
2020	588,827	6.76	501,723	87,104	87,104	87,104	87,104	87,104	87,104
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			457,386						
Net increase (decrease) in OPEB Expense				73,029	73,029	73,029	73,029	84,992	87,104

Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Changes in Assumptions									
Fiscal	Differences from Changes in Actuarial Assumptions	Recognition Period (years)	Remaining Balance	2020	2021	2022	2023	2024	2025
2017									
2018	3,488,245	6.15	1,786,663	567,194	567,194	567,194	567,194	85,081	
2019	0	6.15	0	0	0	0	0	0	0
2020	4,961,449	6.76	4,227,507	733,942	733,942	733,942	733,942	733,942	733,942
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			6,014,170						
Net increase (decrease) in OPEB Expense				1,301,136	1,301,136	1,301,136	1,301,136	819,023	733,942

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									
2018	(287,751)	5.00	(115,101)	(57,550)	(57,550)	(57,551)			
2019	142,012	5.00	85,208	28,402	28,402	28,402	28,404		
2020	731,844	5.00	585,475	146,369	146,369	146,369	146,369	146,368	
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			555,582						
Net increase (decrease) in OPEB Expense				117,221	117,221	117,220	174,773	146,368	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	501,723	(44,337)	457,386
III. Changes of Assumptions	6,014,170	0	6,014,170
IV. Net Difference Between Projected & Actual Earnings on OPEB Plan Investments	<u>670,683</u>	<u>(115,101)</u>	<u>555,582</u>
V. Total [I.+II.+III.+IV.]	7,186,576	(159,438)	7,027,138

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	1,491,386
2022	1,491,385
2023	1,548,938
2024	1,050,383
2025	821,046
Thereafter	624,000

4. Discount Rate

The discount rate used to measure the Total OPEB liability was 7.00% as of June 30, 2020 and 7.00% 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 sufficient to make all projected benefit payments to current plan members. Therefore, the long-term expected rate of return on the OPEB Plan assets was applied to all projected future benefits payments.

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 \$2,157,049. The Town also contributed \$1,500,000 to an OPEB Trust for a total contribution during the measurement period of \$3,657,049 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	14.50%	Domestic Equity - Large Cap	4.80%
Domestic Equity - Small/Mid Cap	3.50%	Domestic Equity - Small/Mid Cap	5.29%
International Equity - Developed Market	16.00%	International Equity - Developed Market	5.45%
International Equity-Emerging Market	6.00%	International Equity-Emerging Market	6.42%
Domestic Fixed Income	20.00%	Domestic Fixed Income	2.05%
International Fixed Income	3.00%	International Fixed Income	3.00%
Alternatives	23.00%	Alternatives	6.50%
Real Estate	14.00%	Real Estate	6.25%
Cash & Cash Equivalents	0.00%	Cash & Cash Equivalents	0.00%
Total	100.00%		
		I. Real Rate of Return**	5.01%
		II. Inflation Assumption	2.50%
		III. Total Nominal Return [I. + II.]	7.51%
		IV. Investment Expense	0.50%
		V. Net Investment Return* [III.-IV.]	7.01%

* 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	3,413,973	(3,657,049)	(243,076)	38,920,018	9.40%
June 30, 2019	2,856,496	(3,123,419)	(266,923)	35,202,796	8.87%
June 30, 2018	2,598,671	(3,040,182)	(441,511)	34,177,472	8.90%
June 30, 2017	2,708,582	(2,955,576)	(246,994)	35,188,394	8.40%

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	40,244,758	45,330,703	51,471,285
II. Fiduciary Net Position	<u>15,469,023</u>	<u>15,469,023</u>	<u>15,469,023</u>
III. Net OPEB Liability (Asset) [I.-II.]	24,775,735	29,861,680	36,002,262
IV. Service Cost	937,999	1,164,959	1,465,372

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	50,722,158	45,330,703	39,939,248
II. Fiduciary Net Position	<u>15,469,023</u>	<u>15,469,023</u>	<u>15,469,023</u>
III. Net OPEB Liability (Asset) [I.-II.]	35,253,135	29,861,680	24,470,225
IV. Service Cost	1,462,308	1,164,959	867,610

EXHIBIT A

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

10. Money Weighted Rate of Return

	Plan Investments / Net External Cash Flows	Periods Invested	Period Weight
I. Beginning value - June 30, 2019	13,689,545	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	0	10	0.8333
September	0	9	0.7500
October	1,500,000	8	0.6667
November	0	7	0.5833
December	0	6	0.5000
January	0	5	0.4167
February	0	4	0.3333
March	0	3	0.2500
April	0	2	0.1667
May	0	1	0.0833
June	0	0	0.0000
II. Total net external cash flow	1,500,000		
III. Earnings and increase in fair value	279,478		
IV. Ending value - June 30, 2020 [I.+II.+III.]	15,469,023		
Money Weighted Rate of Return	1.90%		
Asset Value - June 30, 2020	15,469,023		

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

11. OPEB Liability, OPEB Expense

	Fiscal Year Ending June 30, 2020				
	Town Employees and Retirees	School Employees and Retirees	Public Safety Employees and Retirees	Water Enterprise Employees and Retirees	Total
I. Total OPEB Liability as of June 30, 2020	5,794,208	33,479,653	5,534,938	521,904	45,330,703
II. Fiduciary Net Position as of June 30, 2020	1,977,263	11,424,873	1,888,788	178,099	15,469,023
III. Net OPEB Liability (Asset) as of June 30, 2020 [I. - II.]	3,816,945	22,054,780	3,646,150	343,805	29,861,680
IV. Service Cost	74,396	846,479	227,690	16,394	1,164,959
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	332,056	1,975,221	335,870	31,062	2,674,209
VI. Projected Earnings on OPEB Plan Investments	(129,007)	(746,946)	(123,719)	(11,650)	(1,011,322)
VII. Net Recognition of Deferred (Inflows)/Outflows	190,630	1,101,485	182,100	17,171	1,491,386
VIII. Expense Related to Change in Benefit Terms	0	0	0	0	0
IX. Financial Statement Expense [IV. + V. + VII. + VIII.]	468,075	3,176,239	621,941	52,977	4,319,232
X. Employer Share of Costs	(445,195)	(1,561,005)	(128,986)	(21,863)	(2,157,049)
XI. Employer (Payments) Withdrawals to/from OPEB Trust	(183,212)	(1,108,481)	(190,829)	(17,478)	(1,500,000)
XII. Total Employer Contribution [X. + XI.]	(628,407)	(2,669,486)	(319,815)	(39,341)	(3,657,049)
XIII. Net OPEB Expense [IX. + XII.]	(160,332)	506,753	302,126	13,636	662,183

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

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

Valuation Date	July 1, 2019
For the Measurement Period ending on the Measurement Date of:	June 30, 2020
For the Reporting Period & Fiscal Year ending on:	June 30, 2020
Source of Deferred Inflow/Outflow	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	457,386
II. Deferred (Inflow)/Outflow from Investment Experience	555,582
III. Deferred (Inflow)/Outflow from Changes in Assumptions	6,014,170
Change in Deferred Inflow/Outflow	
I. Deferred Outflow at the beginning of the period	2,467,467
II. Deferred Outflow created during the period	6,282,120
III. Deferred Outflow recognized during the period	1,563,011
IV. Change in Deferred Outflow (II. - III.)	4,719,109
V. Deferred Outflow at end of the period (I. + IV.)	7,186,576
VI. Deferred Inflow at the beginning of the period	(231,063)
VII. Deferred Inflow created during the period	0
VIII. Deferred Inflow recognized during the period	(71,625)
IX. Change in Deferred Inflow (VII. - VIII.)	71,625
X. Deferred Inflow at end of the period (VI. + IX.)	(159,438)
Net OPEB Liability	
I. Net OPEB Liability at beginning of period	24,408,763
II. Service Cost	1,164,959
III. Interest on Total OPEB Liability, Service Cost, and Payments	2,674,209
IV. Projected Investment Income	(1,011,322)
V. Total Employer Contributions	(3,657,049)
VI. Expense Related to Change in Benefit Terms	0
VII. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V. + VI.)	(829,203)
VIII. Deferred Outflow created during the period	6,282,120
IX. Deferred Inflow created during the period	0
X. Net OPEB Liability at end of period (I. + VII. + VIII. + IX.)	29,861,680
Net OPEB Expense	
I. Service Cost	1,164,959
II. Interest on Total OPEB Liability, Service Cost, and Payments	2,674,209
III. Projected Investment Income	(1,011,322)
IV. Recognition of Deferred (Inflow)/Outflow	1,491,386
V. Expense Related to Change in Benefit Terms	0
VI. Financial Statement Expense (I. + II. + III. + IV. + V.)	4,319,232
VII. Benefit Payments	(2,157,049)
VIII. Contributions to Trust	(1,500,000)
IX. Total Employer Payments (VII. + VIII.)	(3,657,049)
X. Total Net OPEB Expense under GASB 75 (VI. + IX.)	662,183

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

The Town's Actuarially Determined Contribution (ADC) is an amount actuarially determined in accordance with the parameters of GASB Statement No. 74/75 which is composed of the service cost and an amortization of the unfunded liability. We have used a 30 year flat dollar amortization of the Town's unfunded liability for the purpose of calculating ADC. The following table shows the components of the Town's annual ADC and the amount actually contributed to the plan:

Actuarially Determined Contribution - Deficiency / (Excess)				
	<u>June 30, 2020</u>	<u>June 30, 2019</u>	For the Fiscal Year Ending:	
			<u>June 30, 2018</u>	<u>June 30, 2017</u>
I. Service Cost	1,164,959	1,018,155	928,906	965,170
II. Amortization of NOL	<u>1,638,912</u>	<u>1,838,341</u>	<u>1,669,765</u>	<u>1,743,412</u>
III. Actuarial Determined Contribution [I. + II.]	3,413,973	2,856,496	2,598,671	2,708,582
IV. Contributions in Relation to the Actuarially Determined Contribution	<u>(3,657,049)</u>	<u>(3,123,419)</u>	<u>(3,040,182)</u>	<u>(2,955,576)</u>
V. Contribution Deficiency / (Excess) [III. + IV.]	<u>(243,076)</u>	<u>(266,923)</u>	<u>(441,511)</u>	<u>(246,994)</u>
Covered Employee Payroll	38,920,018	35,202,796	34,177,472	35,188,394
Contributions as a % of Covered Employee Payroll	9.40%	8.87%	8.90%	8.40%
Discount Rate	7.00%	7.00%	7.00%	7.00%
Money Weighted Rate of Return	1.90%	5.61%	9.62%	13.80%

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, 2019	July 1, 2017	July 1, 2017	July 1, 2017
GASB 75 Measurement Date	June 30, 2019	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
Total OPEB Liability	45,330,703	38,098,308	36,157,159	31,172,639
I. Service Cost	1,164,959	1,018,155	928,906	965,170
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	2,674,209	2,546,413	2,194,113	2,087,749
III. Changes in Benefit Terms	0	0	0	0
IV. Difference Between Expected & Actual Plan Experience	588,827	0	(86,562)	0
V. Changes of Assumptions	4,961,449	0	3,488,245	0
VI. Benefit Payments Excluding Implicit Cost	(1,530,100)	(1,430,424)	(1,354,086)	N/A
VII. Implicit Cost Amount	(626,949)	(192,995)	(186,096)	N/A
VIII. Total Benefit Payments Including Implicit Cost [VI.+VII.]	(2,157,049)	(1,623,419)	(1,540,182)	(1,455,576)
IX. Net Change in OPEB Liability [I.+II.+III.+IV.+V.+VIII.]	7,232,395	1,941,149	4,984,520	1,597,343
X. Total OPEB Liability - Beginning of Period	38,098,308	36,157,159	31,172,639	29,575,296
XI. Prior Period Adjustment	0	0	0	0
XII. Total OPEB Liability - Beginning of Period with Adjustment	38,098,308	36,157,159	31,172,639	29,575,296
XIII. Total OPEB Liability - End of Period [IX.+XII.]	45,330,703	38,098,308	36,157,159	31,172,639
Plan Fiduciary Net Position	15,469,023	13,689,545	11,475,444	9,002,047
XIV. Earning from Plan Investments	279,478	714,101	973,397	1,013,590
XV. Employer Contribution to Trust	3,657,049	3,123,419	3,040,182	2,955,576
XVI. Benefit Payments from Trust, Including Refunds of Member Contributions	(2,157,049)	(1,623,419)	(1,540,182)	(1,455,576)
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.]	1,779,478	2,214,101	2,473,397	2,513,590
XX. Plan Fiduciary Net Position - Beginning of Period	13,689,545	11,475,444	9,002,047	6,488,457
XXI. Prior Period Adjustment	0	0	0	0
XXII. Plan Fiduciary Net Position - Beginning of Period with Adjustment	13,689,545	11,475,444	9,002,047	6,488,457
XXIII. Plan Fiduciary Net Position - End of Period [XIX.+XXII.]	15,469,023	13,689,545	11,475,444	9,002,047
XXIV. Net OPEB Liability [XIII.-XXIII.]	29,861,680	24,408,763	24,681,715	22,170,592
XXV. Plan Fiduciary Net Position as % of Total OPEB Liability [XXIII. / XIII.]	34.12%	35.93%	31.74%	28.88%
XXVI. Covered Employee Payroll	38,920,018	35,202,796	34,177,472	35,188,394
XXVII. Plan NOL as % of Covered Employee Payroll [XXIV. / XXVI.]	76.73%	69.34%	72.22%	63.01%
Single Discount Rate to calculate Plan Liabilities	7.00%	7.00%	7.00%	7.00%

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Notes to Required Supplementary Information:

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

Actuarial Assumptions:

Investment Rate of Return:	7.01%, 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:	7.00%, 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-2014 Mortality Table for Blue Collar Employees projected generationally with scale MP-2016 for males and females, set forward 1 year for females
Teachers: RP-2014 Mortality Table for White Collar Employees projected generationally with scale MP-2016 for males and females

Post-Retirement Mortality:

General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year for females
Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females

Disabled Mortality:

General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year
Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Plan Membership

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

Inactive employees or beneficiaries currently receiving benefits:	378
Active Employees:	<u>619</u>
Total:	997

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

- ✓ Based on recommendations by PERAC, the mortality table has been updated from the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 to the RP-2014 Mortality Table projected generationally with scale MP-2016 for males and females
- ✓ The expected long-term medical trend has been updated to 4.50%
- ✓ Based on recent research by the Society of Actuaries, we have updated the assumption for morbidity or age-related costs of medical care

Contributions/Withdrawals:

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town contributed beyond the pay-as-you-go cost \$1,500,000 for the period ending on the June 30, 2020 Measurement Date. For the year ending on the June 30, 2020 Measurement Date total Town premiums plus implicit costs for the retiree medical program were \$2,157,049. \$626,949 of the \$2,157,049 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 - 7.00% 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 7.01% 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	45,330,703	15,469,023	29,861,680	34.12%	1,164,959	2,157,049	1,500,000	3,657,049	2,157,049	0	1,500,000
2021	June 30, 2021	47,411,012	18,105,086	29,305,926	38.19%	1,202,670	2,300,540	1,500,000	3,800,540	2,300,540	0	1,500,000
2022	June 30, 2022	49,245,010	20,925,937	28,319,073	42.49%	1,241,304	2,457,262	1,500,000	3,957,262	2,457,262	0	1,500,000
2023	June 30, 2023	51,174,574	23,944,530	27,230,044	46.79%	1,285,051	2,685,479	1,500,000	4,185,479	2,685,479	0	1,500,000
2024	June 30, 2024	53,175,046	27,174,726	26,000,320	51.10%	1,327,753	2,788,271	1,500,000	4,288,271	2,788,271	0	1,500,000
2025	June 30, 2025	55,215,402	30,631,359	24,584,043	55.48%	1,372,131	2,931,413	1,500,000	4,431,413	2,931,413	0	1,500,000
2026	June 30, 2026	57,267,533	34,330,302	22,937,231	59.95%	1,422,524	3,119,018	1,500,000	4,619,018	3,119,018	0	1,500,000
2027	June 30, 2027	59,340,707	38,288,541	21,052,166	64.52%	1,470,381	3,291,531	1,500,000	4,791,531	3,291,531	0	1,500,000
2028	June 30, 2028	61,436,168	42,524,252	18,911,916	69.22%	1,518,452	3,462,779	1,500,000	4,962,779	3,462,779	0	1,500,000
2029	June 30, 2029	63,492,872	47,056,887	16,435,985	74.11%	1,572,468	3,692,884	1,500,000	5,192,884	3,692,884	0	1,500,000
2030	June 30, 2030	65,629,966	51,907,259	13,722,707	79.09%	1,624,809	3,834,246	1,500,000	5,334,246	3,834,246	0	1,500,000
2031	June 30, 2031	67,821,828	57,097,642	10,724,186	84.19%	1,679,596	3,888,676	1,500,000	5,388,676	3,888,676	0	1,500,000
2032	June 30, 2032	70,072,545	62,651,871	7,420,674	89.41%	1,734,656	4,000,184	1,500,000	5,500,184	4,000,184	0	1,500,000
2033	June 30, 2033	72,279,210	68,595,452	3,683,758	94.90%	1,793,406	4,091,069	1,500,000	5,591,069	4,091,069	0	1,500,000
2034	June 30, 2034	74,609,918	74,955,678	(345,760)	100.46%	1,855,900	4,268,577	1,500,000	5,768,577	4,268,577	0	1,500,000
2035	June 30, 2035	76,841,137	77,600,010	(758,873)	100.99%	1,918,190	4,441,313	(2,523,123)	1,918,190	4,441,313	0	(2,523,123)
2036	June 30, 2036	79,262,788	80,296,874	(1,034,086)	101.30%	1,983,386	4,634,920	(2,651,534)	1,983,386	4,634,920	0	(2,651,534)
2037	June 30, 2037	81,760,338	83,104,323	(1,343,985)	101.64%	2,058,352	4,785,738	(2,727,386)	2,058,352	4,785,738	0	(2,727,386)
2038	June 30, 2038	84,472,263	86,023,655	(1,551,392)	101.84%	2,135,098	4,944,575	(2,809,477)	2,135,098	4,944,575	0	(2,809,477)
2039	June 30, 2039	87,173,652	89,114,005	(1,940,353)	102.23%	2,218,309	5,060,293	(2,841,984)	2,218,309	5,060,293	0	(2,841,984)
2040	June 30, 2040	90,082,969	92,351,920	(2,268,951)	102.52%	2,300,222	5,208,974	(2,908,752)	2,300,222	5,208,974	0	(2,908,752)
2041	June 30, 2041	93,072,034	95,807,467	(2,735,433)	102.94%	2,385,950	5,303,736	(2,917,786)	2,385,950	5,303,736	0	(2,917,786)
2042	June 30, 2042	96,214,364	99,551,532	(3,337,168)	103.47%	2,477,577	5,350,621	(2,873,044)	2,477,577	5,350,621	0	(2,873,044)
2043	June 30, 2043	99,617,568	103,514,050	(3,896,482)	103.91%	2,578,194	5,493,778	(2,915,584)	2,578,194	5,493,778	0	(2,915,584)
2044	June 30, 2044	103,312,328	107,715,185	(4,402,857)	104.26%	2,684,491	5,637,926	(2,953,435)	2,684,491	5,637,926	0	(2,953,435)
2045	June 30, 2045	107,230,794	112,139,262	(4,908,468)	104.58%	2,795,666	5,818,275	(3,022,609)	2,795,666	5,818,275	0	(3,022,609)
2046	June 30, 2046	111,207,061	116,796,898	(5,589,837)	105.03%	2,914,100	6,010,728	(3,096,628)	2,914,100	6,010,728	0	(3,096,628)
2047	June 30, 2047	115,450,869	121,722,286	(6,271,417)	105.43%	3,037,160	6,190,579	(3,153,419)	3,037,160	6,190,579	0	(3,153,419)
2048	June 30, 2048	119,921,061	127,001,600	(7,080,539)	105.90%	3,168,839	6,313,890	(3,145,051)	3,168,839	6,313,890	0	(3,145,051)
2049	June 30, 2049	124,626,799	132,588,255	(7,961,456)	106.39%	3,306,632	6,512,332	(3,205,700)	3,306,632	6,512,332	0	(3,205,700)
2050	June 30, 2050	129,741,687	138,527,532	(8,785,845)	106.77%	3,454,417	6,697,821	(3,243,404)	3,454,417	6,697,821	0	(3,243,404)
2051	June 30, 2051	135,196,714	144,883,885	(9,687,171)	107.17%	3,606,024	6,848,719	(3,242,695)	3,606,024	6,848,719	0	(3,242,695)

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

ALTERNATIVE FUNDING SCENARIO (OPEN GROUP)

Funding \$1.25 Million Annually - 7.00% 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 7.01% 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	45,330,703	15,469,023	29,861,680	34.12%	1,164,959	2,157,049	1,500,000	3,657,049	2,157,049	0	1,500,000
2021	June 30, 2021	47,411,012	17,846,472	29,564,540	37.64%	1,202,670	2,300,540	1,250,000	3,550,540	2,300,540	0	1,250,000
2022	June 30, 2022	49,245,010	20,390,580	28,854,430	41.41%	1,241,304	2,457,262	1,250,000	3,707,262	2,457,262	0	1,250,000
2023	June 30, 2023	51,174,574	23,113,030	28,061,544	45.17%	1,285,051	2,685,479	1,250,000	3,935,479	2,685,479	0	1,250,000
2024	June 30, 2024	53,175,046	26,026,324	27,148,722	48.94%	1,327,753	2,788,271	1,250,000	4,038,271	2,788,271	0	1,250,000
2025	June 30, 2025	55,215,402	29,143,840	26,071,562	52.78%	1,372,131	2,931,413	1,250,000	4,181,413	2,931,413	0	1,250,000
2026	June 30, 2026	57,267,533	32,479,894	24,787,639	56.72%	1,422,524	3,119,018	1,250,000	4,369,018	3,119,018	0	1,250,000
2027	June 30, 2027	59,340,707	36,049,805	23,290,902	60.75%	1,470,381	3,291,531	1,250,000	4,541,531	3,291,531	0	1,250,000
2028	June 30, 2028	61,436,168	39,869,967	21,566,201	64.90%	1,518,452	3,462,779	1,250,000	4,712,779	3,462,779	0	1,250,000
2029	June 30, 2029	63,492,872	43,957,922	19,534,950	69.23%	1,572,468	3,692,884	1,250,000	4,942,884	3,692,884	0	1,250,000
2030	June 30, 2030	65,629,966	48,332,443	17,297,523	73.64%	1,624,809	3,834,246	1,250,000	5,084,246	3,834,246	0	1,250,000
2031	June 30, 2031	67,821,828	53,013,618	14,808,210	78.17%	1,679,596	3,888,676	1,250,000	5,138,676	3,888,676	0	1,250,000
2032	June 30, 2032	70,072,545	58,022,943	12,049,602	82.80%	1,734,656	4,000,184	1,250,000	5,250,184	4,000,184	0	1,250,000
2033	June 30, 2033	72,279,210	63,383,422	8,895,788	87.69%	1,793,406	4,091,069	1,250,000	5,341,069	4,091,069	0	1,250,000
2034	June 30, 2034	74,609,918	69,119,670	5,490,248	92.64%	1,855,900	4,268,577	1,250,000	5,518,577	4,268,577	0	1,250,000
2035	June 30, 2035	76,841,137	75,258,029	1,583,108	97.94%	1,918,190	4,441,313	1,250,000	5,691,313	4,441,313	0	1,250,000
2036	June 30, 2036	79,262,788	81,826,687	(2,563,899)	103.23%	1,983,386	4,634,920	1,250,000	5,884,920	4,634,920	0	1,250,000
2037	June 30, 2037	81,760,338	84,741,376	(2,981,038)	103.65%	2,058,352	4,785,738	(2,727,386)	2,058,352	4,785,738	0	(2,727,386)
2038	June 30, 2038	84,472,263	87,775,465	(3,303,202)	103.91%	2,135,098	4,944,575	(2,809,477)	2,135,098	4,944,575	0	(2,809,477)
2039	June 30, 2039	87,173,652	90,988,617	(3,814,965)	104.38%	2,218,309	5,060,293	(2,841,984)	2,218,309	5,060,293	0	(2,841,984)
2040	June 30, 2040	90,082,969	94,357,942	(4,274,973)	104.75%	2,300,222	5,208,974	(2,908,752)	2,300,222	5,208,974	0	(2,908,752)
2041	June 30, 2041	93,072,034	97,954,111	(4,882,077)	105.25%	2,385,950	5,303,736	(2,917,786)	2,385,950	5,303,736	0	(2,917,786)
2042	June 30, 2042	96,214,364	101,848,655	(5,634,291)	105.86%	2,477,577	5,350,621	(2,873,044)	2,477,577	5,350,621	0	(2,873,044)
2043	June 30, 2043	99,617,568	105,972,201	(6,354,633)	106.38%	2,578,194	5,493,778	(2,915,584)	2,578,194	5,493,778	0	(2,915,584)
2044	June 30, 2044	103,312,328	110,345,653	(7,033,325)	106.81%	2,684,491	5,637,926	(2,953,435)	2,684,491	5,637,926	0	(2,953,435)
2045	June 30, 2045	107,230,794	114,954,126	(7,723,332)	107.20%	2,795,666	5,818,275	(3,022,609)	2,795,666	5,818,275	0	(3,022,609)
2046	June 30, 2046	111,207,061	119,809,084	(8,602,023)	107.74%	2,914,100	6,010,728	(3,096,628)	2,914,100	6,010,728	0	(3,096,628)
2047	June 30, 2047	115,450,869	124,945,626	(9,494,757)	108.22%	3,037,160	6,190,579	(3,153,419)	3,037,160	6,190,579	0	(3,153,419)
2048	June 30, 2048	119,921,061	130,450,896	(10,529,835)	108.78%	3,168,839	6,313,890	(3,145,051)	3,168,839	6,313,890	0	(3,145,051)
2049	June 30, 2049	124,626,799	136,279,347	(11,652,548)	109.35%	3,306,632	6,512,332	(3,205,700)	3,306,632	6,512,332	0	(3,205,700)
2050	June 30, 2050	129,741,687	142,477,369	(12,735,682)	109.82%	3,454,417	6,697,821	(3,243,404)	3,454,417	6,697,821	0	(3,243,404)
2051	June 30, 2051	135,196,714	149,110,606	(13,913,892)	110.29%	3,606,024	6,848,719	(3,242,695)	3,606,024	6,848,719	0	(3,242,695)

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

ALTERNATIVE FUNDING SCENARIO (OPEN GROUP)

Funding \$1 Million Annually - 7.00% 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 7.01% 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	45,330,703	15,469,023	29,861,680	34.12%	1,164,959	2,157,049	1,500,000	3,657,049	2,157,049	0	1,500,000
2021	June 30, 2021	47,411,012	17,587,858	29,823,154	37.10%	1,202,670	2,300,540	1,000,000	3,300,540	2,300,540	0	1,000,000
2022	June 30, 2022	49,245,010	19,855,223	29,389,787	40.32%	1,241,304	2,457,262	1,000,000	3,457,262	2,457,262	0	1,000,000
2023	June 30, 2023	51,174,574	22,281,531	28,893,043	43.54%	1,285,051	2,685,479	1,000,000	3,685,479	2,685,479	0	1,000,000
2024	June 30, 2024	53,175,046	24,877,923	28,297,123	46.78%	1,327,753	2,788,271	1,000,000	3,788,271	2,788,271	0	1,000,000
2025	June 30, 2025	55,215,402	27,656,322	27,559,080	50.09%	1,372,131	2,931,413	1,000,000	3,931,413	2,931,413	0	1,000,000
2026	June 30, 2026	57,267,533	30,629,487	26,638,046	53.48%	1,422,524	3,119,018	1,000,000	4,119,018	3,119,018	0	1,000,000
2027	June 30, 2027	59,340,707	33,811,070	25,529,637	56.98%	1,470,381	3,291,531	1,000,000	4,291,531	3,291,531	0	1,000,000
2028	June 30, 2028	61,436,168	37,215,682	24,220,486	60.58%	1,518,452	3,462,779	1,000,000	4,462,779	3,462,779	0	1,000,000
2029	June 30, 2029	63,492,872	40,858,958	22,633,914	64.35%	1,572,468	3,692,884	1,000,000	4,692,884	3,692,884	0	1,000,000
2030	June 30, 2030	65,629,966	44,757,627	20,872,339	68.20%	1,624,809	3,834,246	1,000,000	4,834,246	3,834,246	0	1,000,000
2031	June 30, 2031	67,821,828	48,929,593	18,892,235	72.14%	1,679,596	3,888,676	1,000,000	4,888,676	3,888,676	0	1,000,000
2032	June 30, 2032	70,072,545	53,394,014	16,678,531	76.20%	1,734,656	4,000,184	1,000,000	5,000,184	4,000,184	0	1,000,000
2033	June 30, 2033	72,279,210	58,171,391	14,107,819	80.48%	1,793,406	4,091,069	1,000,000	5,091,069	4,091,069	0	1,000,000
2034	June 30, 2034	74,609,918	63,283,662	11,326,256	84.82%	1,855,900	4,268,577	1,000,000	5,268,577	4,268,577	0	1,000,000
2035	June 30, 2035	76,841,137	68,754,303	8,086,834	89.48%	1,918,190	4,441,313	1,000,000	5,441,313	4,441,313	0	1,000,000
2036	June 30, 2036	79,262,788	74,608,436	4,654,352	94.13%	1,983,386	4,634,920	1,000,000	5,634,920	4,634,920	0	1,000,000
2037	June 30, 2037	81,760,338	80,872,944	887,394	98.91%	2,058,352	4,785,738	1,000,000	5,785,738	4,785,738	0	1,000,000
2038	June 30, 2038	84,472,263	87,576,594	(3,104,331)	103.67%	2,135,098	4,944,575	1,000,000	5,944,575	4,944,575	0	1,000,000
2039	June 30, 2039	87,173,652	90,775,805	(3,602,153)	104.13%	2,218,309	5,060,293	(2,841,984)	2,218,309	5,060,293	0	(2,841,984)
2040	June 30, 2040	90,082,969	94,130,212	(4,047,243)	104.49%	2,300,222	5,208,974	(2,908,752)	2,300,222	5,208,974	0	(2,908,752)
2041	June 30, 2041	93,072,034	97,710,418	(4,638,384)	104.98%	2,385,950	5,303,736	(2,917,786)	2,385,950	5,303,736	0	(2,917,786)
2042	June 30, 2042	96,214,364	101,587,880	(5,373,516)	105.58%	2,477,577	5,350,621	(2,873,044)	2,477,577	5,350,621	0	(2,873,044)
2043	June 30, 2043	99,617,568	105,693,146	(6,075,578)	106.10%	2,578,194	5,493,778	(2,915,584)	2,578,194	5,493,778	0	(2,915,584)
2044	June 30, 2044	103,312,328	110,047,036	(6,734,708)	106.52%	2,684,491	5,637,926	(2,953,435)	2,684,491	5,637,926	0	(2,953,435)
2045	June 30, 2045	107,230,794	114,634,576	(7,403,782)	106.90%	2,795,666	5,818,275	(3,022,609)	2,795,666	5,818,275	0	(3,022,609)
2046	June 30, 2046	111,207,061	119,467,133	(8,260,072)	107.43%	2,914,100	6,010,728	(3,096,628)	2,914,100	6,010,728	0	(3,096,628)
2047	June 30, 2047	115,450,869	124,579,705	(9,128,836)	107.91%	3,037,160	6,190,579	(3,153,419)	3,037,160	6,190,579	0	(3,153,419)
2048	June 30, 2048	119,921,061	130,059,324	(10,138,263)	108.45%	3,168,839	6,313,890	(3,145,051)	3,168,839	6,313,890	0	(3,145,051)
2049	June 30, 2049	124,626,799	135,860,326	(11,233,527)	109.01%	3,306,632	6,512,332	(3,205,700)	3,306,632	6,512,332	0	(3,205,700)
2050	June 30, 2050	129,741,687	142,028,975	(12,287,288)	109.47%	3,454,417	6,697,821	(3,243,404)	3,454,417	6,697,821	0	(3,243,404)
2051	June 30, 2051	135,196,714	148,630,780	(13,434,066)	109.94%	3,606,024	6,848,719	(3,242,695)	3,606,024	6,848,719	0	(3,242,695)

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES

Table 1: Projection of Contributions using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total Payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
June 30, 2020	38,920,018	0	38,920,018	0	2,157,049	0	2,157,049
June 30, 2021	36,372,010	3,715,609	40,087,619	0	2,300,540	0	2,300,540
June 30, 2022	34,146,735	7,143,513	41,290,248	0	2,457,262	0	2,457,262
June 30, 2023	32,335,175	10,193,780	42,528,955	0	2,685,479	0	2,685,479
June 30, 2024	30,737,759	13,067,065	43,804,824	0	2,788,271	0	2,788,271
June 30, 2025	29,172,959	15,946,010	45,118,969	0	2,931,413	0	2,931,413
June 30, 2026	27,759,112	18,713,426	46,472,538	0	3,119,018	0	3,119,018
June 30, 2027	26,400,942	21,465,772	47,866,714	0	3,291,531	0	3,291,531
June 30, 2028	24,985,722	24,316,993	49,302,715	0	3,462,779	0	3,462,779
June 30, 2029	23,609,472	27,172,324	50,781,796	0	3,692,884	0	3,692,884
June 30, 2030	22,256,030	30,049,220	52,305,250	0	3,834,246	0	3,834,246
June 30, 2031	21,116,072	32,758,336	53,874,408	0	3,869,188	19,488	3,888,676
June 30, 2032	20,038,108	35,452,532	55,490,640	0	3,951,510	48,674	4,000,184
June 30, 2033	18,990,722	38,164,637	57,155,359	0	4,001,413	89,656	4,091,069
June 30, 2034	18,041,036	40,828,984	58,870,020	0	4,121,987	146,590	4,268,577
June 30, 2035	17,080,939	43,555,182	60,636,121	0	4,223,545	217,768	4,441,313
June 30, 2036	16,148,327	46,306,878	62,455,205	0	4,364,207	270,713	4,634,920
June 30, 2037	15,321,274	49,007,587	64,328,861	0	4,452,735	333,003	4,785,738
June 30, 2038	14,554,264	51,704,463	66,258,727	0	4,540,872	403,703	4,944,575
June 30, 2039	13,901,022	54,345,467	68,246,489	0	4,598,100	462,193	5,060,293
June 30, 2040	13,212,138	57,081,746	70,293,884	0	4,681,741	527,233	5,208,974
June 30, 2041	12,535,872	59,866,829	72,402,701	0	4,682,711	621,025	5,303,736
June 30, 2042	11,811,979	62,762,803	74,574,782	0	4,607,695	742,926	5,350,621
June 30, 2043	11,166,653	65,645,372	76,812,025	0	4,602,462	891,316	5,493,778
June 30, 2044	10,570,563	68,545,823	79,116,386	0	4,562,684	1,075,242	5,637,926
June 30, 2045	9,946,571	71,543,307	81,489,878	0	4,526,470	1,291,805	5,818,275
June 30, 2046	9,345,279	74,589,295	83,934,574	0	4,539,670	1,471,058	6,010,728
June 30, 2047	8,717,274	77,735,337	86,452,611	0	4,517,645	1,672,934	6,190,579
June 30, 2048	8,123,804	80,922,385	89,046,189	0	4,419,407	1,894,483	6,313,890
June 30, 2049	7,513,576	84,203,999	91,717,575	0	4,422,283	2,090,049	6,512,332
June 30, 2050	6,936,370	87,532,732	94,469,102	0	4,395,468	2,302,353	6,697,821
June 30, 2051	6,432,530	90,870,645	97,303,175	0	4,297,692	2,551,027	6,848,719
June 30, 2052	5,930,139	94,292,131	100,222,270	0	4,229,706	2,830,630	7,060,336
June 30, 2053	5,393,024	97,835,914	103,228,938	0	4,188,197	3,137,061	7,325,258
June 30, 2054	4,953,481	101,372,325	106,325,806	0	4,110,447	3,475,560	7,586,007
June 30, 2055	4,516,855	104,998,725	109,515,580	0	4,082,382	3,848,292	7,930,674
June 30, 2056	4,080,236	108,720,811	112,801,047	0	4,099,090	4,199,398	8,298,488
June 30, 2057	3,565,922	112,619,156	116,185,078	0	4,052,544	4,575,846	8,628,390
June 30, 2058	3,091,610	116,579,020	119,670,630	0	4,006,715	4,976,358	8,983,073
June 30, 2059	2,544,028	120,716,721	123,260,749	0	3,989,892	5,378,628	9,368,520

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES (CONTINUED)

Table 1: Projection of Contributions using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total Payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
June 30, 2060	2,150,328	124,808,243	126,958,571	0	3,904,433	5,804,624	9,709,057
June 30, 2061	1,742,016	129,025,312	130,767,328	0	3,749,841	6,269,284	10,019,125
June 30, 2062	1,374,744	133,315,604	134,690,348	0	3,651,370	6,769,586	10,420,956
June 30, 2063	1,015,496	137,715,562	138,731,058	0	3,525,019	7,307,485	10,832,504
June 30, 2064	773,882	142,119,108	142,892,990	0	3,382,054	7,888,548	11,270,602
June 30, 2065	476,444	146,703,336	147,179,780	0	3,277,476	8,512,940	11,790,416
June 30, 2066	229,407	151,365,766	151,595,173	0	3,190,238	9,136,265	12,326,503
June 30, 2067	126,240	156,016,788	156,143,028	0	3,098,039	9,796,729	12,894,768
June 30, 2068	64,746	160,762,573	160,827,319	0	3,007,459	10,493,913	13,501,372
June 30, 2069	36,230	165,615,909	165,652,139	0	2,917,141	11,191,309	14,108,450
June 30, 2070	10,632	170,611,071	170,621,703	0	2,825,006	11,924,003	14,749,009
June 30, 2071	0	175,740,354	175,740,354	0	2,728,308	12,693,501	15,421,809
June 30, 2072	0	181,012,565	181,012,565	0	2,627,735	13,497,355	16,125,090
June 30, 2073	0	186,442,942	186,442,942	0	2,524,520	14,335,882	16,860,402
June 30, 2074	0	192,036,230	192,036,230	0	2,418,878	15,209,810	17,628,688
June 30, 2075	0	197,797,317	197,797,317	0	2,310,997	16,121,117	18,432,114
June 30, 2076	0	203,731,237	203,731,237	0	2,201,110	17,073,525	19,274,635
June 30, 2077	0	209,843,174	209,843,174	0	2,089,458	18,063,988	20,153,446
June 30, 2078	0	216,138,469	216,138,469	0	1,976,518	19,096,586	21,073,104
June 30, 2079	0	222,622,623	222,622,623	0	1,862,702	20,173,100	22,035,802
June 30, 2080	0	229,301,302	229,301,302	0	1,748,536	21,296,398	23,044,934
June 30, 2081	0	236,180,341	236,180,341	0	1,634,573	22,464,744	24,099,317
June 30, 2082	0	243,265,751	243,265,751	0	1,521,407	23,679,830	25,201,237
June 30, 2083	0	250,563,724	250,563,724	0	1,409,615	24,948,933	26,358,548
June 30, 2084	0	258,080,636	258,080,636	0	1,299,785	26,274,151	27,573,936
June 30, 2085	0	265,823,055	265,823,055	0	1,192,464	27,654,774	28,847,238
June 30, 2086	0	273,797,747	273,797,747	0	1,088,063	29,100,850	30,188,913
June 30, 2087	0	282,011,679	282,011,679	0	987,127	30,607,400	31,594,527
June 30, 2088	0	290,472,029	290,472,029	0	890,116	32,180,833	33,070,949
June 30, 2089	0	299,186,190	299,186,190	0	797,477	33,824,827	34,622,304
June 30, 2090	0	308,161,776	308,161,776	0	709,469	35,540,731	36,250,200
June 30, 2091	0	317,406,629	317,406,629	0	626,389	37,329,065	37,955,454
June 30, 2092	0	326,928,828	326,928,828	0	548,329	39,195,399	39,743,728
June 30, 2093	0	336,736,693	336,736,693	0	475,475	41,148,000	41,623,475
June 30, 2094	0	346,838,794	346,838,794	0	407,972	43,187,983	43,595,955

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY NET POSITION PROJECTION DISCLOSURES

Table 2: Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Employer Share of Benefit Payments for Current Plan Members	III. Contributions to Trust for Current Plan Members beyond Pay-as-you- go	IV. Gross Contributions to Trust for Current Plan Members [II. + III.]	V. Administrative Expenses Withdrawn from the Trust for Current Plan Members	VI. Benefit Payments Withdrawn from the Trust for Current Plan Members	VII. Trust Withdrawals for Current Plan Members [V. + VI.]	VIII. Investment Earnings	IX. Ending Fiduciary Net Position for Current Plan Members
June 30, 2020	13,689,545	2,157,049	1,500,000	3,657,049	0	2,157,049	2,157,049	279,478	15,469,023
June 30, 2021	15,469,023	2,300,540	1,360,969	3,661,509	0	2,300,540	2,300,540	1,030,765	17,860,757
June 30, 2022	17,860,757	2,457,262	1,240,489	3,697,751	0	2,457,262	2,457,262	1,294,782	20,396,028
June 30, 2023	20,396,028	2,685,479	1,140,464	3,825,943	0	2,685,479	2,685,479	1,469,058	23,005,550
June 30, 2024	23,005,550	2,788,271	1,052,547	3,840,818	0	2,788,271	2,788,271	1,648,956	25,707,053
June 30, 2025	25,707,053	2,931,413	969,868	3,901,281	0	2,931,413	2,931,413	1,835,483	28,512,404
June 30, 2026	28,512,404	3,119,018	895,984	4,015,002	0	3,119,018	3,119,018	2,029,592	31,437,980
June 30, 2027	31,437,980	3,291,531	827,327	4,118,858	0	3,291,531	3,291,531	2,232,309	34,497,616
June 30, 2028	34,497,616	3,462,779	760,173	4,222,952	0	3,462,779	3,462,779	2,444,476	37,702,265
June 30, 2029	37,702,265	3,692,884	697,380	4,390,264	0	3,692,884	3,692,884	2,666,958	41,066,603
June 30, 2030	41,066,603	3,834,246	638,254	4,472,500	0	3,834,246	3,834,246	2,900,761	44,605,618
June 30, 2031	44,605,618	3,869,188	587,925	4,457,113	0	3,869,188	3,869,188	3,147,112	48,321,167
June 30, 2032	48,321,167	3,951,510	541,662	4,493,172	0	3,951,510	3,951,510	3,405,978	52,220,133
June 30, 2033	52,220,133	4,001,413	498,397	4,499,810	0	4,001,413	4,001,413	3,677,804	56,306,678
June 30, 2034	56,306,678	4,121,987	459,683	4,581,670	0	4,121,987	4,121,987	3,962,937	60,582,708
June 30, 2035	60,582,708	4,223,545	422,544	4,646,089	0	4,223,545	4,223,545	4,261,407	65,048,891
June 30, 2036	65,048,891	4,364,207	387,838	4,752,045	0	4,364,207	4,364,207	4,573,291	69,739,307
June 30, 2037	69,739,307	4,452,735	357,257	4,809,992	0	4,452,735	4,452,735	4,901,035	74,664,596
June 30, 2038	74,664,596	4,540,872	329,487	4,870,359	0	4,540,872	4,540,872	5,245,341	79,835,721
June 30, 2039	79,835,721	4,598,100	305,533	4,903,633	0	4,598,100	4,598,100	5,607,012	85,286,073
June 30, 2040	85,286,073	4,681,741	281,934	4,963,675	0	4,681,741	4,681,741	5,988,268	91,029,042
June 30, 2041	91,029,042	4,682,711	259,711	4,942,422	0	4,682,711	4,682,711	6,390,085	97,057,813
June 30, 2042	97,057,813	4,607,695	237,587	4,845,282	0	4,607,695	4,607,695	6,811,939	103,364,413
June 30, 2043	103,364,413	4,602,462	218,065	4,820,527	0	4,602,462	4,602,462	7,253,359	109,944,521
June 30, 2044	109,944,521	4,562,684	200,412	4,763,096	0	4,562,684	4,562,684	7,714,016	116,783,707
June 30, 2045	116,783,707	4,526,470	183,088	4,709,558	0	4,526,470	4,526,470	8,192,846	123,867,836
June 30, 2046	123,867,836	4,539,670	167,010	4,706,680	0	4,539,670	4,539,670	8,688,890	131,252,678
June 30, 2047	131,252,678	4,517,645	151,249	4,668,894	0	4,517,645	4,517,645	9,206,024	138,937,017
June 30, 2048	138,937,017	4,419,407	136,847	4,556,254	0	4,419,407	4,419,407	9,744,200	146,923,581
June 30, 2049	146,923,581	4,422,283	122,881	4,545,164	0	4,422,283	4,422,283	10,303,577	155,259,990
June 30, 2050	155,259,990	4,395,468	110,137	4,505,605	0	4,395,468	4,395,468	10,887,520	163,955,294
June 30, 2051	163,955,294	4,297,692	99,162	4,396,854	0	4,297,692	4,297,692	11,496,683	173,000,112
June 30, 2052	173,000,112	4,229,706	88,755	4,318,461	0	4,229,706	4,229,706	12,130,366	182,388,603
June 30, 2053	182,388,603	4,188,197	78,365	4,266,562	0	4,188,197	4,188,197	12,788,141	192,118,048
June 30, 2054	192,118,048	4,110,447	69,882	4,180,329	0	4,110,447	4,110,447	13,469,883	202,182,253
June 30, 2055	202,182,253	4,082,382	61,866	4,144,248	0	4,082,382	4,082,382	14,175,108	212,570,935
June 30, 2056	212,570,935	4,099,090	54,258	4,153,348	0	4,099,090	4,099,090	14,903,092	223,328,887
June 30, 2057	223,328,887	4,052,544	46,038	4,098,582	0	4,052,544	4,052,544	15,656,941	234,456,020
June 30, 2058	234,456,020	4,006,715	38,751	4,045,466	0	4,006,715	4,006,715	16,436,702	245,955,115
June 30, 2059	245,955,115	3,989,892	30,959	4,020,851	0	3,989,892	3,989,892	17,242,520	257,849,966

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY POSITION PROJECTION DISCLOSURES (CONTINUED)

Table 2: Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Employer Share of Benefit Payments for Current Plan Members	III. Contributions to Trust for Current Plan Members beyond Pay-as-you- go	IV. Gross Contributions to Trust for Current Plan Members [III. + III.]	V. Administrative Expenses Withdrawn from the Trust for Current Plan Members	VI. Benefit Payments Withdrawn from the Trust for Current Plan Members	VII. Trust Withdrawals for Current Plan Members [V. + VI.]	VIII. Investment Earnings	IX. Ending Fiduciary Net Position for Current Plan Members
June 30, 2060	257,849,966	3,904,433	25,406	3,929,839	0	3,904,433	3,904,433	18,076,158	254,251,693
June 30, 2061	254,251,693	3,749,841	19,982	3,769,823	0	3,749,841	3,749,841	17,823,732	250,739,291
June 30, 2062	250,739,291	3,651,370	15,310	3,666,680	0	3,651,370	3,651,370	17,577,352	247,267,328
June 30, 2063	247,267,328	3,525,019	10,980	3,535,999	0	3,525,019	3,525,019	17,333,818	243,869,190
June 30, 2064	243,869,190	3,382,054	8,124	3,390,178	0	3,382,054	3,382,054	17,095,510	240,579,722
June 30, 2065	240,579,722	3,277,476	4,856	3,282,332	0	3,277,476	3,277,476	16,864,806	237,356,841
June 30, 2066	237,356,841	3,190,238	2,270	3,192,508	0	3,190,238	3,190,238	16,638,793	234,191,782
June 30, 2067	234,191,782	3,098,039	1,213	3,099,252	0	3,098,039	3,098,039	16,416,886	231,107,016
June 30, 2068	231,107,016	3,007,459	604	3,008,063	0	3,007,459	3,007,459	16,200,623	228,106,079
June 30, 2069	228,106,079	2,917,141	328	2,917,469	0	2,917,141	2,917,141	15,990,247	225,192,435
June 30, 2070	225,192,435	2,825,006	93	2,825,099	0	2,825,006	2,825,006	15,785,993	222,368,413
June 30, 2071	222,368,413	2,728,308	0	2,728,308	0	2,728,308	2,728,308	15,588,026	219,640,105
June 30, 2072	219,640,105	2,627,735	0	2,627,735	0	2,627,735	2,627,735	15,396,771	217,012,370
June 30, 2073	217,012,370	2,524,520	0	2,524,520	0	2,524,520	2,524,520	15,212,567	214,487,850
June 30, 2074	214,487,850	2,418,878	0	2,418,878	0	2,418,878	2,418,878	15,035,598	212,068,972
June 30, 2075	212,068,972	2,310,997	0	2,310,997	0	2,310,997	2,310,997	14,866,035	209,757,975
June 30, 2076	209,757,975	2,201,110	0	2,201,110	0	2,201,110	2,201,110	14,704,034	207,556,865
June 30, 2077	207,556,865	2,089,458	0	2,089,458	0	2,089,458	2,089,458	14,549,736	205,467,407
June 30, 2078	205,467,407	1,976,518	0	1,976,518	0	1,976,518	1,976,518	14,403,265	203,490,889
June 30, 2079	203,490,889	1,862,702	0	1,862,702	0	1,862,702	1,862,702	14,264,711	201,628,187
June 30, 2080	201,628,187	1,748,536	0	1,748,536	0	1,748,536	1,748,536	14,134,136	199,879,651
June 30, 2081	199,879,651	1,634,573	0	1,634,573	0	1,634,573	1,634,573	14,011,564	198,245,078
June 30, 2082	198,245,078	1,521,407	0	1,521,407	0	1,521,407	1,521,407	13,896,980	196,723,671
June 30, 2083	196,723,671	1,409,615	0	1,409,615	0	1,409,615	1,409,615	13,790,329	195,314,056
June 30, 2084	195,314,056	1,299,785	0	1,299,785	0	1,299,785	1,299,785	13,691,515	194,014,271
June 30, 2085	194,014,271	1,192,464	0	1,192,464	0	1,192,464	1,192,464	13,600,400	192,821,807
June 30, 2086	192,821,807	1,088,063	0	1,088,063	0	1,088,063	1,088,063	13,516,809	191,733,744
June 30, 2087	191,733,744	987,127	0	987,127	0	987,127	987,127	13,440,535	190,746,617
June 30, 2088	190,746,617	890,116	0	890,116	0	890,116	890,116	13,371,338	189,856,501
June 30, 2089	189,856,501	797,477	0	797,477	0	797,477	797,477	13,308,941	189,059,024
June 30, 2090	189,059,024	709,469	0	709,469	0	709,469	709,469	13,253,038	188,349,555
June 30, 2091	188,349,555	626,389	0	626,389	0	626,389	626,389	13,203,304	187,723,166
June 30, 2092	187,723,166	548,329	0	548,329	0	548,329	548,329	13,159,394	187,174,837
June 30, 2093	187,174,837	475,475	0	475,475	0	475,475	475,475	13,120,956	186,699,362
June 30, 2094	186,699,362	407,972	0	407,972	0	407,972	407,972	13,087,625	186,291,390

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES

Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments for Current Plan Members	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments [II. - III.]	V. Present Value of Funded Benefit Payments using the Long-Term Rate of Return [7.01%]	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 [7.01%]	
June 30, 2020	13,689,545	2,157,049	2,157,049	0	2,157,049	0	2,157,049	Sum of Column V.
June 30, 2021	15,469,023	2,300,540	2,300,540	0	2,149,836	0	2,149,836	52,309,090
June 30, 2022	17,860,757	2,457,262	2,457,262	0	2,145,867	0	2,145,867	
June 30, 2023	20,396,028	2,685,479	2,685,479	0	2,191,536	0	2,191,536	Sum of Column VI.
June 30, 2024	23,005,550	2,788,271	2,788,271	0	2,126,364	0	2,126,364	0
June 30, 2025	25,707,053	2,931,413	2,931,413	0	2,089,081	0	2,089,081	
June 30, 2026	28,512,404	3,119,018	3,119,018	0	2,077,168	0	2,077,168	Sum of Column VII.
June 30, 2027	31,437,980	3,291,531	3,291,531	0	2,048,460	0	2,048,460	[V. + VI.]
June 30, 2028	34,497,616	3,462,779	3,462,779	0	2,013,863	0	2,013,863	52,309,090
June 30, 2029	37,702,265	3,692,884	3,692,884	0	2,006,995	0	2,006,995	
June 30, 2030	41,066,603	3,834,246	3,834,246	0	1,947,316	0	1,947,316	
June 30, 2031	44,605,618	3,869,188	3,869,188	0	1,836,335	0	1,836,335	
June 30, 2032	48,321,167	3,951,510	3,951,510	0	1,752,551	0	1,752,551	
June 30, 2033	52,220,133	4,001,413	4,001,413	0	1,658,428	0	1,658,428	
June 30, 2034	56,306,678	4,121,987	4,121,987	0	1,596,487	0	1,596,487	
June 30, 2035	60,582,708	4,223,545	4,223,545	0	1,528,663	0	1,528,663	
June 30, 2036	65,048,891	4,364,207	4,364,207	0	1,476,099	0	1,476,099	
June 30, 2037	69,739,307	4,452,735	4,452,735	0	1,407,384	0	1,407,384	
June 30, 2038	74,664,596	4,540,872	4,540,872	0	1,341,222	0	1,341,222	
June 30, 2039	79,835,721	4,598,100	4,598,100	0	1,269,157	0	1,269,157	
June 30, 2040	85,286,073	4,681,741	4,681,741	0	1,207,592	0	1,207,592	
June 30, 2041	91,029,042	4,682,711	4,682,711	0	1,128,719	0	1,128,719	
June 30, 2042	97,057,813	4,607,695	4,607,695	0	1,037,881	0	1,037,881	
June 30, 2043	103,364,413	4,602,462	4,602,462	0	968,790	0	968,790	
June 30, 2044	109,944,521	4,562,684	4,562,684	0	897,502	0	897,502	
June 30, 2045	116,783,707	4,526,470	4,526,470	0	832,052	0	832,052	
June 30, 2046	123,867,836	4,539,670	4,539,670	0	779,814	0	779,814	
June 30, 2047	131,252,678	4,517,645	4,517,645	0	725,194	0	725,194	
June 30, 2048	138,937,017	4,419,407	4,419,407	0	662,952	0	662,952	
June 30, 2049	146,923,581	4,422,283	4,422,283	0	619,926	0	619,926	
June 30, 2050	155,259,990	4,395,468	4,395,468	0	575,803	0	575,803	
June 30, 2051	163,955,294	4,297,692	4,297,692	0	526,114	0	526,114	
June 30, 2052	173,000,112	4,229,706	4,229,706	0	483,872	0	483,872	
June 30, 2053	182,388,603	4,188,197	4,188,197	0	447,737	0	447,737	
June 30, 2054	192,118,048	4,110,447	4,110,447	0	410,639	0	410,639	
June 30, 2055	202,182,253	4,082,382	4,082,382	0	381,119	0	381,119	
June 30, 2056	212,570,935	4,099,090	4,099,090	0	357,611	0	357,611	
June 30, 2057	223,328,887	4,052,544	4,052,544	0	330,390	0	330,390	
June 30, 2058	234,456,020	4,006,715	4,006,715	0	305,255	0	305,255	
June 30, 2059	245,955,115	3,989,892	3,989,892	0	284,061	0	284,061	

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES (CONTINUED)

Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments for Current Plan Members	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments [II. - III.]	V. Present Value of Funded Benefit Payments using the Long-Term Rate of Return [7.01%]	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 [7.01%]
June 30, 2060	257,849,966	3,904,433	3,904,433	0	259,767	0	259,767
June 30, 2061	254,251,693	3,749,841	3,749,841	0	233,138	0	233,138
June 30, 2062	250,739,291	3,651,370	3,651,370	0	212,145	0	212,145
June 30, 2063	247,267,328	3,525,019	3,525,019	0	191,388	0	191,388
June 30, 2064	243,869,190	3,382,054	3,382,054	0	171,597	0	171,597
June 30, 2065	240,579,722	3,277,476	3,277,476	0	155,397	0	155,397
June 30, 2066	237,356,841	3,190,238	3,190,238	0	141,352	0	141,352
June 30, 2067	234,191,782	3,098,039	3,098,039	0	128,275	0	128,275
June 30, 2068	231,107,016	3,007,459	3,007,459	0	116,367	0	116,367
June 30, 2069	228,106,079	2,917,141	2,917,141	0	105,478	0	105,478
June 30, 2070	225,192,435	2,825,006	2,825,006	0	95,456	0	95,456
June 30, 2071	222,368,413	2,728,308	2,728,308	0	86,149	0	86,149
June 30, 2072	219,640,105	2,627,735	2,627,735	0	77,538	0	77,538
June 30, 2073	217,012,370	2,524,520	2,524,520	0	69,613	0	69,613
June 30, 2074	214,487,850	2,418,878	2,418,878	0	62,330	0	62,330
June 30, 2075	212,068,972	2,310,997	2,310,997	0	55,649	0	55,649
June 30, 2076	209,757,975	2,201,110	2,201,110	0	49,531	0	49,531
June 30, 2077	207,556,865	2,089,458	2,089,458	0	43,938	0	43,938
June 30, 2078	205,467,407	1,976,518	1,976,518	0	38,841	0	38,841
June 30, 2079	203,490,889	1,862,702	1,862,702	0	34,206	0	34,206
June 30, 2080	201,628,187	1,748,536	1,748,536	0	30,006	0	30,006
June 30, 2081	199,879,651	1,634,573	1,634,573	0	26,213	0	26,213
June 30, 2082	198,245,078	1,521,407	1,521,407	0	22,800	0	22,800
June 30, 2083	196,723,671	1,409,615	1,409,615	0	19,741	0	19,741
June 30, 2084	195,314,056	1,299,785	1,299,785	0	17,010	0	17,010
June 30, 2085	194,014,271	1,192,464	1,192,464	0	14,583	0	14,583
June 30, 2086	192,821,807	1,088,063	1,088,063	0	12,435	0	12,435
June 30, 2087	191,733,744	987,127	987,127	0	10,542	0	10,542
June 30, 2088	190,746,617	890,116	890,116	0	8,884	0	8,884
June 30, 2089	189,856,501	797,477	797,477	0	7,438	0	7,438
June 30, 2090	189,059,024	709,469	709,469	0	6,183	0	6,183
June 30, 2091	188,349,555	626,389	626,389	0	5,102	0	5,102
June 30, 2092	187,723,166	548,329	548,329	0	4,173	0	4,173
June 30, 2093	187,174,837	475,475	475,475	0	3,382	0	3,382
June 30, 2094	186,699,362	407,972	407,972	0	2,712	0	2,712

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>	Medicare Supplement Plans: effective January 1, 2020 Non-Medicare Plans: effective July 1, 2020 Dental Plans: N/A
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Benefits Offered</u>	Comprehensive Medical Insurance and \$3,000 in 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 have been reflected.
<u>Surviving Spouse Coverage</u>	Surviving spouses pay 100% of premiums.

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	- 50% for Harvard Pilgrim PPO - 40% for all other plans	- 50% for Harvard Pilgrim PPO - 40% for all other plans
Dental	100%	100%
Life	50%	N/A

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONSPre-Retirement Mortality

General: RP-2014 Mortality Table for Blue Collar Employees projected generationally with scale MP-2016 for males and females, set forward 1 year for females
Teachers: RP-2014 Mortality Table for White Collar Employees projected generationally with scale MP-2016 for males and females

Post-Retirement Mortality

General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year for females
Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females

Disabled Mortality

General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year
Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females

Assumption Experience Study

The actuarial assumptions used to calculate the actuarial accrued liability and the service cost primarily reflect the latest experience studies of the Massachusetts PERAC issued in 2014 and their most recent analysis of retiree mortality during 2015 and 2016.

Discount Rate

7.00% per annum (previously 7.00%, used in the calculation of the Interest Cost)

Net Long Term Rate of Return

7.01% (based on investment policy)

Municipal Bond Rate

2.66% as of June 30, 2020 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)

Actuarial Cost Method

Individual Entry Age Normal

Asset-Valuation Method

Market Value of Assets as of the Measurement Date, June 30, 2020

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Employee Termination

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

Non-Public Safety Employees

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

Public Safety Employees

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

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Retirement Rates for Eligible Employees

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

Permanent Disability Rates

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

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Trend Rate

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

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

Dental Plans: N/A

Participation Rate

It was assumed that 80% of employees eligible to receive retirement benefits would enroll in the retiree medical 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	45,330,703	38,098,308
II. Total OPEB Liability (Excluding Implicit Subsidy)	<u>36,091,008</u>	<u>35,030,669</u>
III. Liability from Implicit Subsidy [I. - II.]	9,239,695	3,067,639

	For the Measurement Period Ending	
Impact on Payments	<u>June 30, 2020</u>	<u>June 30, 2019</u>
IV. Employer Payments (Including Implicit Subsidy)	2,157,049	1,623,419
V. Actual Employer Payments	<u>1,530,100</u>	<u>1,430,424</u>
VI. Implicit Subsidy [IV. - V.]	626,949	192,995

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	4,801	3,027	44 & Under	9,861	6,462	65 to 69	4,533	4,533
25 to 29	7,083	3,149	45 to 49	10,832	8,159	70 to 74	4,533	4,533
30 to 34	8,950	3,953	50 to 54	12,742	10,745	75 to 79	4,533	4,533
35 to 39	9,220	4,963	55 to 59	14,730	13,969	80 to 84	4,533	4,533
40 to 44	9,436	6,184	60 to 64	17,529	17,926	85 to 89	4,533	4,533
45 to 49	10,366	7,808	65 to 69	21,012	22,360	90 & Over	4,533	4,533
50 to 54	12,193	10,282	70 to 74	24,779	26,796			
55 to 59	14,096	13,367	75 to 79	28,776	31,648			
60 to 64	16,774	17,154	80 to 84	32,994	36,377			
65 to 69	20,107	21,397	85 to 89	37,662	41,638			
70 & Over	23,712	25,642	90 & Over	37,662	41,638			

*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, 2019	July 1, 2017
A. Average Age at Hire	35.81	35.46
B. Average Service	<u>9.61</u>	<u>9.63</u>
C. Average Current Age	45.42	45.09

Retired Employees & Spouses

Valuation Date	July 1, 2019	July 1, 2017
A. Under Age 65	65	66
B. Age 65 & Over	<u>313</u>	<u>300</u>
C. Total	378	366

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	41	2								43
25-29	42	3								45
30-34	34	14	7							55
35-39	28	18	16	3	1					66
40-44	34	16	21	12	1					84
45-49	29	10	11	13	12	2				77
50-54	21	21	14	14	11	5	2			88
55-59	26	7	16	18	4	8	3			82
60-64	9	3	11	11	13	8	5	2		62
65-69	1	1	1	3	3	1			1	11
70+	2		1	1			1		1	6
Total	267	95	98	75	45	24	11	2	2	619

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>
Blue Cross Benchmark	40		19	59
Blue Cross High Deductible	2			2
Fallon Direct Benchmark	17		8	25
Fallon Direct High Deductible	1			1
Fallon Select Benchmark	61		30	91
Fallon Select High Deductible	5		4	9
Harvard Pilgrim Benchmark	47		61	108
Harvard Pilgrim High Deductible	9		13	22
Tufts Navigator Benchmark	17		9	26
Tufts Navigator High Deductible	4		1	5
Harvard Pilgrim PPO	2			2
Tufts Medicare Preferred HMO	1	5		6
Tufts Medicare PDP Plus	12	21		33
HPHC Medicare Enhance	66	31		97
BCBS Medex	44	35		79
Total	328	92	145	565

	<u>Per Contract Costs (monthly)</u>		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Blue Cross Benchmark	1,068.00		2,863.00
Blue Cross High Deductible	862.00		2,315.00
Fallon Direct Benchmark	736.00		1,980.00
Fallon Direct High Deductible	620.00		1,671.00
Fallon Select Benchmark	790.00		2,129.00
Fallon Select High Deductible	665.00		1,795.00
Harvard Pilgrim Benchmark	1,030.00		2,683.00
Harvard Pilgrim High Deductible	797.00		2,080.00
Tufts Navigator Benchmark	1,084.00		2,838.00
Tufts Navigator High Deductible	839.00		2,198.00
Harvard Pilgrim PPO	2,658.00		5,902.00
Tufts Medicare Preferred HMO	327.00	654.00	
Tufts Medicare PDP Plus	369.00	738.00	
HPHC Medicare Enhance	382.00	764.00	
BCBS Medex	405.00	810.00	
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.