

# **Town of Bellingham Other Postemployment Benefits Plan**

## **GASB 74 & GASB 75 Actuarial Valuation**

With a Valuation Date of July 1, 2019

As of the Measurement Date:  
June 30, 2020

For the Reporting Date:  
June 30, 2020

Delivered December 9, 2020



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December 9, 2020

***Personal and Confidential***

Ms. Beth Cornell-Smith  
Human Resources Director  
Town of Bellingham  
10 Mechanic Street  
Bellingham, MA 02019

Dear Ms. Cornell-Smith:

We have performed an actuarial valuation of the Town of Bellingham 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 Bellingham, of Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75") effective for the fiscal years ending June 30, 2017 and June 30, 2018 respectively.

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

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

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

Very truly yours,

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

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

December 9, 2020

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Bellingham 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, the Plan saw an experience gain of \$8,212,492 or 10.12% of the beginning Total OPEB Liability ("TOL"). This was mainly due to a reduction in the number of retirees over 65 who remained on Active plans as well as fewer covered retirees than expected. This was also due to the Medicare Supplement plan premium increasing by 6% rather than the expected 10% increase over the 2-year period.

#### 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 \$4.3 million.
- ✓ The expected long-term medical trend has been updated to 4.50% decreasing the disclosed liability by \$7.1 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 \$4.7 million.
- ✓ Assumption changes caused Service Cost to decrease by \$180 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 \$6,318 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 5.94 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 \$571,289 of OPEB assets as of June 30, 2020.
- ✓ Funding Policy - The Town is expected to contribute \$50,000 annually.
- ✓ Investment Policy - The Town is expected to earn 2.50% on assets based on its investment policy.

## EXECUTIVE SUMMARY

### Recommended Trust Contributions

We recommend a Fiscal 2021 contribution to an OPEB Trust of \$390,000 beyond pay-as-you-go costs which would increase by 3.00% per year thereafter. We have provided a projection of the Plan's funded status on page 23.

### Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare supplement) plans - represent 78.53% of the total plan liabilities
- ✓ Age at which plan participants retire
- ✓ Percentage of plan participants who elect coverage for themselves and/or a spouse
- ✓ Medical care cost inflation rate - We currently assume medical costs increase at 4.50% per year for Active plans and 4.50% per year for Medicare supplement plans.
- ✓ Discount Rate (2.75%) – Higher discount rates yield lower liabilities and vice versa
- ✓ Cost Sharing - Under Massachusetts law you may charge retirees up to 50% of premiums for health insurance

### Medicare Buy-In

Recently, some of our clients have seen substantial cost savings by “buying into” Medicare for retirees who would otherwise be ineligible. To buy into Medicare the Town would need to pay the Medicare Part A premium and the Medicare Part A and B penalties. While the cost to buy into Medicare is significant, it is likely still far less than the cost of the claims that the associated retirees are expected to incur. Under Actuarial Standards of Practice for OPEB, we are required to reflect the projected higher healthcare costs that occur as retirees age. The Town currently has nine retirees or covered spouses who are over the age of 65 and are enrolled in Active medical plans rather than Medicare Supplement (Senior) plans. You may wish to review their Medicare eligibility to see if they are already eligible for Medicare or if a “buy-in” is appropriate as this could yield a reduction in your OPEB annual costs and disclosed liabilities. If you are in this situation, we encourage you to talk to your healthcare consultant to see if this might be viable.

## EXECUTIVE SUMMARY

### Key Plan Metrics

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

Representative Plan Statistics		
Valuation Date	July 1, 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	78,236,198	81,124,133
Per Eligible Active Plan Participant	88,686	83,272
Per Retiree/Spouse Plan Participant	115,085	141,449
Total Annual Service Cost (Annual Benefit Accrual)	2,906,707	3,201,129
Per Eligible Active Plan Participant	6,107	6,600
Expected Employer Share of Retiree Costs	1,770,876	1,715,869
Per Retiree/Spouse Plan Participant	5,658	5,958
Net OPEB Liability as a % of Covered Payroll	241.50%	260.90%



## 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	313	78,236,198	78,236,198	1,770,876	1,770,876
June 30, 2025	426	95,969,405	82,784,052	2,658,592	2,293,325
June 30, 2030	459	114,984,368	85,559,169	3,416,148	2,541,935
June 30, 2035	459	136,294,023	87,481,947	4,101,225	2,632,420
June 30, 2040	446	162,124,123	89,764,196	4,703,646	2,604,295
June 30, 2045	429	194,869,908	93,070,953	5,669,056	2,707,573
June 30, 2050	416	237,023,715	97,650,632	6,514,765	2,683,997

## PRINCIPAL RESULTS OF THE VALUATION

### **Town of Bellingham Assuming Funding - 2.75% 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	42,214,545	40,386,819
B. Retirees/Disabled	<u>36,021,653</u>	<u>40,737,314</u>
C. Total	78,236,198	81,124,133
II. Fiduciary Net Position [Plan Assets]	571,289	514,133
III. Net OPEB Liability (Asset) [I. - II.]	77,664,909	80,610,000
IV. Funded Ratio [II. / I.]	0.73%	0.63%
V. Number of Eligible Participants		
A. Actives	476	485
B. Retirees/Disabled & Dependents	<u>313</u>	<u>288</u>
C. Total	789	773
VI. Service Cost	2,906,707	3,201,129
VII. Financial Statement Expense	6,823,620	8,363,689
VIII. Employer Contribution to the OPEB Trust	(50,000)	0
IX. Deferred Inflow of Resources	(6,829,918)	0
X. Deferred Outflow of Resources	10,304,436	11,422,353
XI. Money Weighted Rate of Return	1.32%	1.43%
XII. 20-year Municipal Bond Rate (SAPIHG)	2.66%	2.79%
XIII. Expected Long Term Rate of Return (Net of Expense)	2.50%	2.75%
XIV. Crossover Year	Immediate	Immediate
XV. Discount Rate	2.75%	2.75%

## PRINCIPAL RESULTS OF THE VALUATION

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

	Town Employees and Retirees	School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Highway Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	Sanitation Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Total
I. Total OPEB Liability									
A. Actives	2,628,383	30,614,239	4,402,398	2,954,228	633,271	147,981	82,045	752,000	42,214,545
B. Retirees/Disabled	19,832,824	12,746,478	917,150	1,294,722	321,494	0	106,500	802,485	36,021,653
C. Total	22,461,207	43,360,717	5,319,548	4,248,950	954,765	147,981	188,545	1,554,485	78,236,198
II. Fiduciary Net Position [Plan Assets]	164,013	316,625	38,844	31,026	6,972	1,081	1,377	11,351	571,289
III. Net OPEB Liability (Asset) [I. - II.]	22,297,194	43,044,092	5,280,704	4,217,924	947,793	146,900	187,168	1,543,134	77,664,909
IV. Number of Eligible Participants									
A. Actives	44	352	30	27	6	3	1	13	476
B. Retirees/Disabled	185	100	6	6	2	0	1	8	313
C. Total	229	452	36	33	13	3	2	21	789
<b>For the Reporting Date and Fiscal Year Ending June 30, 2020</b>									
V. Service Cost	231,686	2,124,540	205,875	225,864	20,372	23,294	7,823	67,253	2,906,707
VI. Financial Statement Expense	1,332,829	4,314,388	473,391	441,403	67,645	31,292	17,300	145,372	6,823,620
VII. Employer Share of Costs	(843,219)	(756,751)	(59,559)	(47,049)	(26,202)	(3)	(3,404)	(34,689)	(1,770,876)
VIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(13,723)	(28,208)	(3,447)	(2,794)	(597)	(109)	(122)	(1,000)	(50,000)
IX. Total Employer Contribution [VII. + VIII.]	(856,942)	(784,959)	(63,006)	(49,843)	(26,799)	(112)	(3,526)	(35,689)	(1,820,876)

## PRINCIPAL RESULTS OF THE VALUATION

**Town of Bellingham**  
**Assuming Funding - 2.75% discount rate**  
**For the Period Ending on the June 30, 2020 Measurement Date**

	<b>Actives</b>			<b>Retirees/Disabled</b>			<b>Grand Total</b>
	Under Age 65	Age 65+	Actives Total	Under Age 65	Age 65 +	Retirees Total	
<b>Present Value of Future Benefits</b>							
A. Participants	16,665,454	29,685,365	46,350,819	1,670,713	24,312,598	25,983,311	72,334,130
B. Spouses	<u>8,711,940</u>	<u>20,778,845</u>	<u>29,490,785</u>	<u>1,036,555</u>	<u>9,001,787</u>	<u>10,038,342</u>	<u>39,529,127</u>
C. Total	25,377,394	50,464,210	75,841,604	2,707,268	33,314,385	36,021,653	111,863,257
<b>Total OPEB Liability</b>							
A. Participants	9,194,483	16,524,673	25,719,156	1,670,713	24,312,598	25,983,311	51,702,467
B. Spouses	<u>4,895,982</u>	<u>11,599,407</u>	<u>16,495,389</u>	<u>1,036,555</u>	<u>9,001,787</u>	<u>10,038,342</u>	<u>26,533,731</u>
C. Total	14,090,465	28,124,080	42,214,545	2,707,268	33,314,385	36,021,653	78,236,198
<b>Service Cost</b>							
A. Participants	609,202	1,174,769	1,783,971	0	0	0	1,783,971
B. Spouses	<u>305,361</u>	<u>817,375</u>	<u>1,122,736</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,122,736</u>
C. Total	914,563	1,992,144	2,906,707	0	0	0	2,906,707

## EXHIBIT A

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

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

#### 1. OPEB Expense Development

<b>Components of the Town's OPEB Expenses for the Fiscal Year Ending June 30, 2020</b>	
<b>Description</b>	<b>Amount</b>
I. Service Cost	2,906,707
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	2,286,664
III. Deferred (Inflows)/Outflows from Plan Experience*	(1,057,275)
IV. Deferred (Inflows)/Outflows from Changes of Assumptions*	2,696,204
V. Projected Earnings on OPEB Plan Investments	(13,474)
VI. Deferred (Inflows)/Outflows from Earnings on Plan Investments**	4,794
VII. Financial Statement Expense Prior to Plan Design Changes [I. + II. + III. + IV. + V. + VI.]	6,823,620
VIII. Expense Related to Change in Benefit Terms***	0
IX. Financial Statement Expense [VII. + VIII.]	6,823,620

\* Amortized over 5.94 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
<b>I. Balances for June 30, 2019</b>	81,124,133	514,133	80,610,000
<b>II. Prior Period Adjustment</b>	0	0	0
<b>III. Balances for June 30, 2019 with Adjustment [I. + II.]</b>	81,124,133	514,133	80,610,000
<b>Changes for the year:</b>			
IV. Service Cost	2,906,707	0	2,906,707
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	2,286,664	0	2,286,664
VI. Changes in Benefit Terms *	0	0	0
VII. Change in Assumptions **	1,902,062	0	1,902,062
VIII. Differences Between Actual and Expected Experience **	(8,212,492)	0	(8,212,492)
IX. Net Investment Income	0	7,156	(7,156)
X. Employer Contributions to Trust	0	1,820,876	(1,820,876)
XI. Benefit Payments Withdrawn from Trust	0	(1,770,876)	1,770,876
XII. Benefit Payments Excluding Implicit Cost	(1,388,583)	0	(1,388,583)
XIII. Implicit Cost Amount	(382,293)	0	(382,293)
XIV. Total Benefit Payments Including Implicit Cost [XII. + XIII.]	(1,770,876)	0	(1,770,876)
XV. Administrative Expense	0	0	0
XVI. Other Charges	0	0	0
<b>XVII. Net Changes [IV.+V.+VI.+VII.+VIII.+IX.+X.+XI.+XIV.+XV.+XVI.]</b>	<b>(2,887,935)</b>	<b>57,156</b>	<b>(2,945,091)</b>
<b>XVIII. Balances at June 30, 2020 [III.+XVII.]</b>	<b>78,236,198</b>	<b>571,289</b>	<b>77,664,909</b>

\* Recognized Immediately

\*\* Amortized over 5.94 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	1,834,685	5.64	858,788	325,299	325,299	325,299	208,190		
2019	0	5.64	0	0	0	0	0	0	
2020	(8,212,492)	5.94	(6,829,918)	(1,382,574)	(1,382,574)	(1,382,574)	(1,382,574)	(1,382,574)	(1,299,622)
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			(5,971,130)						
Net increase (decrease) in OPEB Expense				(1,057,275)	(1,057,275)	(1,057,275)	(1,174,384)	(1,382,574)	(1,299,622)

Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Changes in Assumptions									
Fiscal	Differences from Changes in Actuarial Assumptions	Recognition Period (years)	Remaining Balance	2020	2021	2022	2023	2024	2025
2017									
2018	4,502,203	5.64	2,107,414	798,263	798,263	798,263	510,888		
2019	8,898,393	5.64	5,742,935	1,577,729	1,577,729	1,577,729	1,577,729	1,009,748	
2020	1,902,062	5.94	1,581,850	320,212	320,212	320,212	320,212	320,212	301,002
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			9,432,199						
Net increase (decrease) in OPEB Expense				2,696,204	2,696,204	2,696,204	2,408,829	1,329,960	301,002

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	10,976	5.00	4,391	2,195	2,195	2,196			
2019	6,674	5.00	4,004	1,335	1,335	1,335	1,334		
2020	6,318	5.00	5,054	1,264	1,264	1,264	1,264	1,262	
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			13,449						
Net increase (decrease) in OPEB Expense				4,794	4,794	4,795	2,598	1,262	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	858,788	(6,829,918)	(5,971,130)
III. Changes of Assumptions	9,432,199	0	9,432,199
IV. Net Difference Between Projected & Actual Earnings on OPEB Plan Investments	<u>13,449</u>	<u>0</u>	<u>13,449</u>
V. Total [I.+II.+III.+IV.]	10,304,436	(6,829,918)	3,474,518

## 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	1,643,723
2022	1,643,724
2023	1,237,043
2024	(51,352)
2025	(998,620)
Thereafter	0

#### 4. Discount Rate

The discount rate used to measure the Total OPEB liability was 2.75% as of June 30, 2020 and 2.75% as of June 30, 2019. The projection of cash flows used to determine the discount rate assumed that contributions will be made in accordance with the Town's funding policy. Based on these assumptions, the OPEB Plan's Fiduciary Net Position is projected to be insufficient to make all projected benefit payments to current plan members. Therefore, the long-term expected rate of return on the OPEB Plan assets is applied to the projected benefits payments which the Fiduciary Net Position is expected to be sufficient to cover and the Municipal Bond Rate is applied thereafter. The Municipal Bond Rate is based on the S&P Municipal Bond 20 - Year High Grade Index ("SAPIHG"), which was 2.66% as of June 30, 2020. The S&P Municipal Bond 20 - Year High Grade Index is the index rate for 20 year, tax exempt general obligation municipal bonds with an average rate of AA/Aa or higher.

## EXHIBIT A

### FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

#### 5. Funding Policy

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. For the period ending on the June 30, 2020 Measurement Date, total Town premiums plus implicit costs for the retiree medical program were \$1,770,876. The Town also contributed \$50,000 to an OPEB Trust for a total contribution during the measurement period of \$1,820,876 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	0.00%	Domestic Equity - Large Cap	4.80%
Domestic Equity - Small/Mid Cap	0.00%	Domestic Equity - Small/Mid Cap	5.29%
International Equity - Developed Market	0.00%	International Equity - Developed Market	5.45%
International Equity-Emerging Market	0.00%	International Equity-Emerging Market	6.42%
Domestic Fixed Income	0.00%	Domestic Fixed Income	2.05%
International Fixed Income	0.00%	International Fixed Income	3.00%
Alternatives	0.00%	Alternatives	6.50%
Real Estate	0.00%	Real Estate	6.25%
Cash & Cash Equivalents	100.00%	Cash & Cash Equivalents	0.00%
Total	100.00%		
		I. Real Rate of Return**	0.00%
		II. Inflation Assumption	2.50%
		III. Total Nominal Return [I. + II.]	2.50%
		IV. Investment Expense	0.00%
		V. Net Investment Return [III.-IV.]	2.50%

\* 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	6,639,492	(1,820,876)	4,818,616	32,165,485	5.66%
June 30, 2019	7,075,463	(1,715,869)	5,359,594	30,891,835	5.55%
June 30, 2018	5,580,666	(1,525,583)	4,055,083	29,992,073	5.09%
June 30, 2017	5,575,718	(1,210,598)	4,365,120	27,445,923	4.41%

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	65,478,113	78,236,198	94,878,958
II. Fiduciary Net Position	<u>571,289</u>	<u>571,289</u>	<u>571,289</u>
III. Net OPEB Liability (Asset) [I.-II.]	64,906,824	77,664,909	94,307,669
IV. Service Cost	2,175,597	2,906,707	3,962,143

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	92,867,585	78,236,198	67,292,621
II. Fiduciary Net Position	<u>571,289</u>	<u>571,289</u>	<u>571,289</u>
III. Net OPEB Liability (Asset) [I.-II.]	92,296,296	77,664,909	66,721,332
IV. Service Cost	3,907,075	2,906,707	2,234,326

## 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	514,133	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	0	10	0.8333
September	0	9	0.7500
October	0	8	0.6667
November	50,000	7	0.5833
December	0	6	0.5000
January	0	5	0.4167
February	0	4	0.3333
March	0	3	0.2500
April	0	2	0.1667
May	0	1	0.0833
<u>June</u>	<u>0</u>	0	0.0000
II. Total net external cash flow	50,000		
III. Earnings and increase in fair value	7,156		
IV. Ending value - June 30, 2020 [I.+II.+III.]	571,289		
Money Weighted Rate of Return	1.32%		
Asset Value - June 30, 2020	571,289		

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

**11. OPEB Liability, OPEB Expense**

	Fiscal Year Ending June 30, 2020								
					Highway		Sanitation		
	Town Employees and Retirees	School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Total
I. Total OPEB Liability as of June 30, 2020	22,461,207	43,360,717	5,319,548	4,248,950	954,765	147,981	188,545	1,554,485	78,236,198
II. Fiduciary Net Position as of June 30, 2020	164,013	316,625	38,844	31,026	6,972	1,081	1,377	11,351	571,289
III. Net OPEB Liability (Asset) as of June 30, 2020 [I. - II.]	22,297,194	43,044,092	5,280,704	4,217,924	947,793	146,900	187,168	1,543,134	77,664,909
IV. Service Cost	231,686	2,124,540	205,875	225,864	20,372	23,294	7,823	67,253	2,906,707
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	633,098	1,286,323	156,671	127,002	27,379	4,914	5,549	45,728	2,286,664
VI. Projected Earnings on OPEB Plan Investments	(3,861)	(7,473)	(917)	(732)	(165)	(25)	(33)	(268)	(13,474)
VII. Net Recognition of Deferred (Inflows)/Outflows	471,906	910,998	111,762	89,269	20,059	3,109	3,961	32,659	1,643,723
VIII. Expense Related to Change in Benefit Terms	0	0	0	0	0	0	0	0	0
IX. Financial Statement Expense [IV. + V. + VII. + VIII.]	1,332,829	4,314,388	473,391	441,403	67,645	31,292	17,300	145,372	6,823,620
X. Employer Share of Costs	(843,219)	(756,751)	(59,559)	(47,049)	(26,202)	(3)	(3,404)	(34,689)	(1,770,876)
XI. Employer (Payments) Withdrawals to/from OPEB Trust	(13,723)	(28,208)	(3,447)	(2,794)	(597)	(109)	(122)	(1,000)	(50,000)
XII. Total Employer Contribution [X. + XI.]	(856,942)	(784,959)	(63,006)	(49,843)	(26,799)	(112)	(3,526)	(35,689)	(1,820,876)
XIII. Net OPEB Expense [IX. + XII.]	475,887	3,529,429	410,385	391,560	40,846	31,180	13,774	109,683	5,002,744

## 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
<b>Source of Deferred Inflow/Outflow</b>	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	(5,971,130)
II. Deferred (Inflow)/Outflow from Investment Experience	13,449
III. Deferred (Inflow)/Outflow from Changes in Assumptions	9,432,199
<b>Change in Deferred Inflow/Outflow</b>	
I. Deferred Outflow at the beginning of the period	11,422,353
II. Deferred Outflow created during the period	1,908,380
III. Deferred Outflow recognized during the period	3,026,297
IV. Change in Deferred Outflow (II. - III. )	(1,117,917)
V. Deferred Outflow at end of the period (I. + IV. )	10,304,436
VI. Deferred Inflow at the beginning of the period	0
VII. Deferred Inflow created during the period	(8,212,492)
VIII. Deferred Inflow recognized during the period	(1,382,574)
IX. Change in Deferred Inflow (VII. - VIII. )	(6,829,918)
X. Deferred Inflow at end of the period (VI. + IX. )	(6,829,918)
<b>Net OPEB Liability</b>	
I. Net OPEB Liability at beginning of period	80,610,000
II. Service Cost	2,906,707
III. Interest on Total OPEB Liability, Service Cost, and Payments	2,286,664
IV. Projected Investment Income	(13,474)
V. Total Employer Contributions	(1,820,876)
VI. Expense Related to Change in Benefit Terms	0
VII. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V. + VI. )	3,359,021
VIII. Deferred Outflow created during the period	1,908,380
IX. Deferred Inflow created during the period	(8,212,492)
X. Net OPEB Liability at end of period (I. + VII. + VIII. + IX. )	77,664,909
<b>Net OPEB Expense</b>	
I. Service Cost	2,906,707
II. Interest on Total OPEB Liability, Service Cost, and Payments	2,286,664
III. Projected Investment Income	(13,474)
IV. Recognition of Deferred (Inflow)/Outflow	1,643,723
V. Expense Related to Change in Benefit Terms	0
VI. Financial Statement Expense (I. + II. + III. + IV. + V. )	6,823,620
VII. Benefit Payments	(1,770,876)
VIII. Contributions to Trust	(50,000)
IX. Total Employer Payments (VII. + VIII. )	(1,820,876)
X. Total Net OPEB Expense under GASB 75 (VI. + IX. )	5,002,744



## EXHIBIT B

### REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

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

<b>Actuarially Determined Contribution - Deficiency / (Excess)</b>				
	<u><b>June 30, 2020</b></u>	<u><b>June 30, 2019</b></u>	<u><b>For the Fiscal Year Ending: June 30, 2018</b></u>	<u><b>June 30, 2017</b></u>
I. Service Cost	2,906,707	3,201,129	2,517,169	2,771,538
II. Amortization of NOL	<u>2,498,644</u>	<u>3,874,334</u>	<u>3,063,497</u>	<u>2,804,180</u>
III. Actuarial Determined Contribution [I. + II.]	6,639,492	7,075,463	5,580,666	5,575,718
IV. Contributions in Relation to the Actuarially Determined Contribution	<u>(1,820,876)</u>	<u>(1,715,869)</u>	<u>(1,525,583)</u>	<u>(1,210,598)</u>
V. Contribution Deficiency / (Excess) [III. + IV.]	<u>4,818,616</u>	<u>5,359,594</u>	<u>4,055,083</u>	<u>4,365,120</u>
Covered Employee Payroll	32,165,485	30,891,835	29,992,073	27,445,923
Contributions as a % of Covered Employee Payroll	5.66%	5.55%	5.09%	4.41%
Discount Rate	2.75%	2.75%	3.50%	3.25%
Money Weighted Rate of Return	1.32%	1.43%	0.57%	2.75%

## 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, 2016
GASB 75 Measurement Date	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
For the Reporting Period & Fiscal Year Ending on:	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
<b>Total OPEB Liability</b>	78,236,198	81,124,133	68,268,802	58,819,995
I. Service Cost	2,906,707	3,201,129	2,517,169	2,771,538
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	2,286,664	2,471,678	2,120,333	1,871,855
III. Changes in Benefit Terms	0	0	0	0
IV. Difference Between Expected & Actual Plan Experience	(8,212,492)	0	1,834,685	0
V. Changes of Assumptions	1,902,062	8,898,393	4,502,203	0
VI. Benefit Payments Excluding Implicit Cost	(1,388,583)	(1,435,737)	(1,286,488)	N/A
VII. Implicit Cost Amount	(382,293)	(280,132)	(239,095)	N/A
VIII. Total Benefit Payments Including Implicit Cost [VI.+VII.]	(1,770,876)	(1,715,869)	(1,525,583)	(1,284,525)
IX. Net Change in OPEB Liability [I.+II.+III.+IV.+V.+VIII.]	(2,887,935)	12,855,331	9,448,807	3,358,868
X. Total OPEB Liability - Beginning of Period	81,124,133	68,268,802	58,819,995	55,461,127
XI. Prior Period Adjustment	0	0	0	0
XII. Total OPEB Liability - Beginning of Period with Adjustment	81,124,133	68,268,802	58,819,995	55,461,127
XIII. Total OPEB Liability - End of Period [IX.+XII.]	78,236,198	81,124,133	68,268,802	58,819,995
<b>Plan Fiduciary Net Position</b>	571,289	514,133	506,868	503,984
XIV. Earning from Plan Investments	7,156	7,265	2,884	1,508
XV. Employer Contribution to Trust	1,820,876	1,715,869	1,525,583	1,210,598
XVI. Benefit Payments from Trust, Including Refunds of Member Contributions	(1,770,876)	(1,715,869)	(1,525,583)	(1,210,598)
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.]	57,156	7,265	2,884	1,508
XX. Plan Fiduciary Net Position - Beginning of Period	514,133	506,868	503,984	502,476
XXI. Prior Period Adjustment	0	0	0	0
XXII. Plan Fiduciary Net Position - Beginning of Period with Adjustment	514,133	506,868	503,984	502,476
XXIII. Plan Fiduciary Net Position - End of Period [XIX.+XXII.]	571,289	514,133	506,868	503,984
XXIV. Net OPEB Liability [XIII.-XXIII.]	77,664,909	80,610,000	67,761,934	58,316,011
XXV. Plan Fiduciary Net Position as % of Total OPEB Liability [XXIII. / XIII.]	0.73%	0.63%	0.74%	0.86%
XXVI. Covered Employee Payroll	32,165,485	30,891,835	29,992,073	27,445,923
XXVII. Plan NOL as % of Covered Employee Payroll [XXIV. / XXVI.]	241.45%	260.94%	225.93%	212.48%
Single Discount Rate to calculate Plan Liabilities	2.75%	2.75%	3.50%	3.25%

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of July 1, 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:	2.50%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate	2.66% as of June 30, 2020 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
Single Equivalent Discount Rate:	2.75%, net of OPEB plan investment expense, including inflation.
Inflation:	2.50% as of June 30, 2020 and for future periods
Salary Increases:	3.00% annually as of June 30, 2020 and for future periods
Cost of Living Adjustment:	Not Applicable

## EXHIBIT B

### REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

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

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Plan Membership

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

Inactive employees or beneficiaries currently receiving benefits:	313
Active Employees:	<u>476</u>
Total:	789

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 \$50,000 for the period ending on the June 30, 2020 Measurement Date. For the year ending on the June 30, 2020 Measurement Date total Town premiums plus implicit costs for the retiree medical program were \$1,770,876. \$382,293 of the \$1,770,876 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 - 2.75% discount rate

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with an expected 2.50% return	III. Net OPEB Liability (Asset) [I. - II.]	IV. Funded Ratio [III. / 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	78,236,198	571,289	77,664,909	0.73%	2,906,707	1,770,876	50,000	1,820,876	1,770,876	0	50,000
2021	June 30, 2021	81,585,684	636,192	80,949,492	0.78%	3,083,486	1,943,746	50,000	1,993,746	1,943,746	0	50,000
2022	June 30, 2022	85,272,189	702,718	84,569,471	0.82%	3,222,917	2,139,202	50,000	2,189,202	2,139,202	0	50,000
2023	June 30, 2023	88,775,151	770,907	88,004,244	0.87%	3,343,373	2,334,756	50,000	2,384,756	2,334,756	0	50,000
2024	June 30, 2024	92,355,391	840,801	91,514,590	0.91%	3,496,991	2,484,319	50,000	2,534,319	2,484,319	0	50,000
2025	June 30, 2025	95,969,405	912,442	95,056,963	0.95%	3,642,009	2,658,592	50,000	2,708,592	2,658,592	0	50,000
2026	June 30, 2026	99,675,038	985,874	98,689,164	0.99%	3,790,091	2,802,529	50,000	2,852,529	2,802,529	0	50,000
2027	June 30, 2027	103,382,880	1,061,142	102,321,738	1.03%	3,938,026	3,001,742	50,000	3,051,742	3,001,742	0	50,000
2028	June 30, 2028	107,141,524	1,138,292	106,003,232	1.06%	4,098,913	3,169,524	50,000	3,219,524	3,169,524	0	50,000
2029	June 30, 2029	111,080,584	1,217,370	109,863,214	1.10%	4,265,281	3,244,110	50,000	3,294,110	3,244,110	0	50,000
2030	June 30, 2030	114,984,368	1,298,425	113,685,943	1.13%	4,432,359	3,416,148	50,000	3,466,148	3,416,148	0	50,000
2031	June 30, 2031	119,029,285	1,381,507	117,647,778	1.16%	4,588,746	3,610,723	50,000	3,660,723	3,610,723	0	50,000
2032	June 30, 2032	123,076,265	1,466,666	121,609,599	1.19%	4,775,916	3,736,750	50,000	3,786,750	3,736,750	0	50,000
2033	June 30, 2033	127,297,508	1,553,954	125,743,554	1.22%	4,953,058	3,817,232	50,000	3,867,232	3,817,232	0	50,000
2034	June 30, 2034	131,668,961	1,643,424	130,025,537	1.25%	5,139,816	3,980,522	50,000	4,030,522	3,980,522	0	50,000
2035	June 30, 2035	136,294,023	1,735,131	134,558,892	1.27%	5,338,736	4,101,225	50,000	4,151,225	4,101,225	0	50,000
2036	June 30, 2036	140,843,717	1,829,130	139,014,587	1.30%	5,548,316	4,193,959	50,000	4,243,959	4,193,959	0	50,000
2037	June 30, 2037	145,852,505	1,925,479	143,927,026	1.32%	5,751,615	4,325,403	50,000	4,375,403	4,325,403	0	50,000
2038	June 30, 2038	151,065,569	2,024,237	149,041,332	1.34%	5,987,575	4,501,547	50,000	4,551,547	4,501,547	0	50,000
2039	June 30, 2039	156,467,906	2,125,464	154,342,442	1.36%	6,238,408	4,615,850	50,000	4,665,850	4,615,850	0	50,000
2040	June 30, 2040	162,124,123	2,229,222	159,894,901	1.38%	6,486,677	4,703,646	50,000	4,753,646	4,703,646	0	50,000
2041	June 30, 2041	168,002,341	2,335,574	165,666,767	1.39%	6,739,773	4,892,378	50,000	4,942,378	4,892,378	0	50,000
2042	June 30, 2042	174,317,682	2,444,584	171,873,098	1.40%	7,017,303	5,066,737	50,000	5,116,737	5,066,737	0	50,000
2043	June 30, 2043	180,731,553	2,556,320	178,175,233	1.41%	7,313,261	5,187,641	50,000	5,237,641	5,187,641	0	50,000
2044	June 30, 2044	187,621,877	2,670,849	184,951,028	1.42%	7,611,260	5,405,050	50,000	5,455,050	5,405,050	0	50,000
2045	June 30, 2045	194,869,908	2,788,241	192,081,667	1.43%	7,943,347	5,669,056	50,000	5,719,056	5,669,056	0	50,000
2046	June 30, 2046	202,533,126	2,908,568	199,624,558	1.44%	8,286,073	5,816,611	50,000	5,866,611	5,816,611	0	50,000
2047	June 30, 2047	210,375,410	3,031,903	207,343,507	1.44%	8,654,898	6,013,754	50,000	6,063,754	6,013,754	0	50,000
2048	June 30, 2048	218,668,280	3,158,322	215,509,958	1.44%	9,027,267	6,222,314	50,000	6,272,314	6,222,314	0	50,000
2049	June 30, 2049	227,731,332	3,287,901	224,443,431	1.44%	9,440,213	6,328,039	50,000	6,378,039	6,328,039	0	50,000
2050	June 30, 2050	237,023,715	3,420,720	233,602,995	1.44%	9,872,252	6,514,765	50,000	6,564,765	6,514,765	0	50,000
2051	June 30, 2051	247,022,281	3,556,859	243,465,422	1.44%	10,303,371	6,689,476	50,000	6,739,476	6,689,476	0	50,000



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

### ALTERNATIVE FUNDING SCENARIO (OPEN GROUP)

#### Alternative Funding & Alternative Investment Scenario - 4.25% 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 expected 6.50% 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 [VII. - VIII. - IX.]
2020	June 30, 2020	62,397,451	571,289	61,826,162	0.92%	1,944,580	1,770,876	50,000	1,820,876	1,770,876	0	1,820,876
2021	June 30, 2021	64,262,662	1,010,898	63,251,764	1.57%	2,062,844	1,943,746	390,000	2,333,746	1,943,746	0	2,333,746
2022	June 30, 2022	66,076,886	1,491,156	64,585,730	2.26%	2,156,124	2,139,202	401,700	2,540,902	2,139,202	0	2,540,902
2023	June 30, 2023	70,802,787	2,015,067	68,787,720	2.85%	2,236,709	2,334,756	413,751	2,748,507	2,334,756	0	2,748,507
2024	June 30, 2024	73,658,204	2,585,843	71,072,361	3.51%	2,339,478	2,484,319	426,164	2,910,483	2,484,319	0	2,910,483
2025	June 30, 2025	76,540,557	3,206,913	73,333,644	4.19%	2,436,495	2,658,592	438,949	3,097,541	2,658,592	0	3,097,541
2026	June 30, 2026	79,495,981	3,881,942	75,614,039	4.88%	2,535,562	2,802,529	452,117	3,254,646	2,802,529	0	3,254,646
2027	June 30, 2027	82,453,165	4,614,846	77,838,319	5.60%	2,634,530	3,001,742	465,681	3,467,423	3,001,742	0	3,467,423
2028	June 30, 2028	85,450,866	5,409,805	80,041,061	6.33%	2,742,163	3,169,524	479,651	3,649,175	3,169,524	0	3,649,175
2029	June 30, 2029	88,592,456	6,271,287	82,321,169	7.08%	2,853,463	3,244,110	494,041	3,738,151	3,244,110	0	3,738,151
2030	June 30, 2030	91,705,912	7,204,060	84,501,852	7.86%	2,965,237	3,416,148	508,862	3,925,010	3,416,148	0	3,925,010
2031	June 30, 2031	94,931,927	8,213,218	86,718,709	8.65%	3,069,861	3,610,723	524,128	4,134,851	3,610,723	0	4,134,851
2032	June 30, 2032	98,159,587	9,304,198	88,855,389	9.48%	3,195,077	3,736,750	539,852	4,276,602	3,736,750	0	4,276,602
2033	June 30, 2033	101,526,228	10,482,806	91,043,422	10.33%	3,313,584	3,817,232	556,048	4,373,280	3,817,232	0	4,373,280
2034	June 30, 2034	105,012,669	11,755,238	93,257,431	11.19%	3,438,524	3,980,522	572,729	4,553,251	3,980,522	0	4,553,251
2035	June 30, 2035	108,701,374	13,128,110	95,573,264	12.08%	3,571,602	4,101,225	589,911	4,691,136	4,101,225	0	4,691,136
2036	June 30, 2036	112,329,968	14,608,482	97,721,486	13.00%	3,711,810	4,193,959	607,608	4,801,567	4,193,959	0	4,801,567
2037	June 30, 2037	116,324,711	16,203,889	100,120,822	13.93%	3,847,816	4,325,403	625,836	4,951,239	4,325,403	0	4,951,239
2038	June 30, 2038	120,482,372	17,922,373	102,559,999	14.88%	4,005,674	4,501,547	644,611	5,146,158	4,501,547	0	5,146,158
2039	June 30, 2039	124,790,986	19,772,515	105,018,471	15.84%	4,173,480	4,615,850	663,949	5,279,799	4,615,850	0	5,279,799
2040	June 30, 2040	129,302,080	21,763,471	107,538,609	16.83%	4,339,572	4,703,646	683,867	5,387,513	4,703,646	0	5,387,513
2041	June 30, 2041	133,990,230	23,905,012	110,085,218	17.84%	4,508,892	4,892,378	704,383	5,596,761	4,892,378	0	5,596,761
2042	June 30, 2042	139,027,005	26,207,560	112,819,445	18.85%	4,694,559	5,066,737	725,514	5,792,251	5,066,737	0	5,792,251
2043	June 30, 2043	144,142,361	28,682,235	115,460,126	19.90%	4,892,554	5,187,641	747,279	5,934,920	5,187,641	0	5,934,920
2044	June 30, 2044	149,637,711	31,340,899	118,296,812	20.94%	5,091,914	5,405,050	769,697	6,174,747	5,405,050	0	6,174,747
2045	June 30, 2045	155,418,348	34,196,205	121,222,143	22.00%	5,314,080	5,669,056	792,788	6,461,844	5,669,056	0	6,461,844
2046	June 30, 2046	161,530,116	37,261,651	124,268,465	23.07%	5,543,363	5,816,611	816,572	6,633,183	5,816,611	0	6,633,183
2047	June 30, 2047	167,784,697	40,551,632	127,233,065	24.17%	5,790,106	6,013,754	841,069	6,854,823	6,013,754	0	6,854,823
2048	June 30, 2048	174,398,640	44,081,501	130,317,139	25.28%	6,039,220	6,222,314	866,301	7,088,615	6,222,314	0	7,088,615
2049	June 30, 2049	181,626,839	47,867,631	133,759,208	26.35%	6,315,480	6,328,039	892,290	7,220,329	6,328,039	0	7,220,329
2050	June 30, 2050	189,037,941	51,927,485	137,110,456	27.47%	6,604,513	6,514,765	919,059	7,433,824	6,514,765	0	7,433,824
2051	June 30, 2051	197,012,256	56,279,684	140,732,572	28.57%	6,892,931	6,689,476	946,631	7,636,107	6,689,476	0	7,636,107
2052	June 30, 2052	205,582,712	60,944,083	144,638,629	29.64%	7,219,952	6,883,833	975,030	7,858,863	6,883,833	0	7,858,863
2053	June 30, 2053	214,509,185	65,941,855	148,567,330	30.74%	7,560,292	7,154,753	1,004,281	8,159,034	7,154,753	0	8,159,034
2054	June 30, 2054	223,897,310	71,295,574	152,601,736	31.84%	7,916,904	7,483,537	1,034,409	8,517,946	7,483,537	0	8,517,946
2055	June 30, 2055	233,770,514	77,029,309	156,741,205	32.95%	8,300,684	7,806,808	1,065,441	8,872,249	7,806,808	0	8,872,249
2056	June 30, 2056	244,169,151	83,168,722	161,000,429	34.06%	8,696,086	8,086,146	1,097,404	9,183,550	8,086,146	0	9,183,550



## 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	32,165,485	0	32,165,485	0	1,770,876	0	1,770,876
June 30, 2021	30,117,831	3,012,619	33,130,450	0	1,943,746	0	1,943,746
June 30, 2022	28,327,784	5,796,580	34,124,364	0	2,139,202	0	2,139,202
June 30, 2023	26,631,874	8,516,221	35,148,095	0	2,334,756	0	2,334,756
June 30, 2024	25,187,326	11,015,212	36,202,538	0	2,484,319	0	2,484,319
June 30, 2025	23,810,774	13,477,840	37,288,614	0	2,658,592	0	2,658,592
June 30, 2026	22,506,758	15,900,514	38,407,272	0	2,802,529	0	2,802,529
June 30, 2027	21,219,557	18,339,933	39,559,490	0	3,001,742	0	3,001,742
June 30, 2028	20,018,145	20,728,130	40,746,275	0	3,169,524	0	3,169,524
June 30, 2029	18,947,180	23,021,483	41,968,663	0	3,244,110	0	3,244,110
June 30, 2030	17,910,365	25,317,358	43,227,723	0	3,416,148	0	3,416,148
June 30, 2031	16,924,171	27,600,384	44,524,555	0	3,592,789	17,934	3,610,723
June 30, 2032	16,116,368	29,743,924	45,860,292	0	3,695,308	41,442	3,736,750
June 30, 2033	15,312,764	31,923,337	47,236,101	0	3,742,967	74,265	3,817,232
June 30, 2034	14,533,390	34,119,794	48,653,184	0	3,859,990	120,532	3,980,522
June 30, 2035	13,803,649	36,309,131	50,112,780	0	3,924,027	177,198	4,101,225
June 30, 2036	13,158,679	38,457,484	51,616,163	0	3,971,289	222,670	4,193,959
June 30, 2037	12,431,186	40,733,462	53,164,648	0	4,046,608	278,795	4,325,403
June 30, 2038	11,754,479	43,005,108	54,759,587	0	4,159,095	342,452	4,501,547
June 30, 2039	11,221,805	45,180,570	56,402,375	0	4,220,098	395,752	4,615,850
June 30, 2040	10,665,370	47,429,076	58,094,446	0	4,246,705	456,941	4,703,646
June 30, 2041	10,140,297	49,696,982	59,837,279	0	4,349,750	542,628	4,892,378
June 30, 2042	9,633,812	51,998,585	61,632,397	0	4,419,342	647,395	5,066,737
June 30, 2043	9,199,626	54,281,743	63,481,369	0	4,414,332	773,309	5,187,641
June 30, 2044	8,659,979	56,725,831	65,385,810	0	4,475,686	929,364	5,405,050
June 30, 2045	8,186,455	59,160,929	67,347,384	0	4,558,554	1,110,502	5,669,056
June 30, 2046	7,693,728	61,674,078	69,367,806	0	4,546,671	1,269,940	5,816,611
June 30, 2047	7,247,140	64,201,700	71,448,840	0	4,560,137	1,453,617	6,013,754
June 30, 2048	6,692,005	66,900,300	73,592,305	0	4,565,452	1,656,862	6,222,314
June 30, 2049	6,158,342	69,641,732	75,800,074	0	4,487,869	1,840,170	6,328,039
June 30, 2050	5,682,611	72,391,465	78,074,076	0	4,472,721	2,042,044	6,514,765
June 30, 2051	5,133,127	75,283,171	80,416,298	0	4,410,404	2,279,072	6,689,476
June 30, 2052	4,623,896	78,204,891	82,828,787	0	4,346,748	2,537,085	6,883,833
June 30, 2053	4,142,202	81,171,449	85,313,651	0	4,336,454	2,818,299	7,154,753
June 30, 2054	3,594,614	84,278,447	87,873,061	0	4,353,234	3,130,303	7,483,537
June 30, 2055	3,113,059	87,396,194	90,509,253	0	4,335,345	3,471,463	7,806,808
June 30, 2056	2,626,896	90,597,635	93,224,531	0	4,283,016	3,803,130	8,086,146
June 30, 2057	2,150,695	93,870,572	96,021,267	0	4,200,235	4,161,939	8,362,174
June 30, 2058	1,732,412	97,169,493	98,901,905	0	4,120,640	4,546,978	8,667,618
June 30, 2059	1,382,957	100,486,005	101,868,962	0	4,012,430	4,937,698	8,950,128

## 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	1,076,963	103,848,068	104,925,031	0	3,908,943	5,350,812	9,259,755
June 30, 2061	789,251	107,283,531	108,072,782	0	3,803,796	5,804,533	9,608,329
June 30, 2062	512,642	110,802,323	111,314,965	0	3,719,557	6,289,238	10,008,795
June 30, 2063	302,819	114,351,595	114,654,414	0	3,655,678	6,805,583	10,461,261
June 30, 2064	189,223	117,904,823	118,094,046	0	3,579,399	7,362,504	10,941,903
June 30, 2065	104,320	121,532,547	121,636,867	0	3,506,090	7,959,962	11,466,052
June 30, 2066	46,311	125,239,662	125,285,973	0	3,433,466	8,566,051	11,999,517
June 30, 2067	10,957	129,033,595	129,044,552	0	3,356,437	9,208,188	12,564,625
June 30, 2068	0	132,915,889	132,915,889	0	3,274,076	9,889,733	13,163,809
June 30, 2069	0	136,903,366	136,903,366	0	3,186,938	10,578,552	13,765,490
June 30, 2070	0	141,010,467	141,010,467	0	3,096,140	11,300,071	14,396,211
June 30, 2071	0	145,240,781	145,240,781	0	3,001,623	12,062,809	15,064,432
June 30, 2072	0	149,598,004	149,598,004	0	2,903,377	12,857,899	15,761,276
June 30, 2073	0	154,085,944	154,085,944	0	2,801,380	13,686,104	16,487,484
June 30, 2074	0	158,708,522	158,708,522	0	2,695,665	14,549,841	17,245,506
June 30, 2075	0	163,469,778	163,469,778	0	2,586,249	15,454,161	18,040,410
June 30, 2076	0	168,373,871	168,373,871	0	2,473,309	16,398,868	18,872,177
June 30, 2077	0	173,425,087	173,425,087	0	2,357,048	17,378,256	19,735,304
June 30, 2078	0	178,627,840	178,627,840	0	2,237,680	18,403,384	20,641,064
June 30, 2079	0	183,986,675	183,986,675	0	2,115,657	19,473,424	21,589,081
June 30, 2080	0	189,506,275	189,506,275	0	1,991,340	20,581,536	22,572,876
June 30, 2081	0	195,191,463	195,191,463	0	1,865,165	21,737,467	23,602,632
June 30, 2082	0	201,047,207	201,047,207	0	1,737,790	22,942,795	24,680,585
June 30, 2083	0	207,078,623	207,078,623	0	1,609,909	24,196,736	25,806,645
June 30, 2084	0	213,290,982	213,290,982	0	1,482,319	25,504,251	26,986,570
June 30, 2085	0	219,689,711	219,689,711	0	1,355,881	26,871,237	28,227,118
June 30, 2086	0	226,280,402	226,280,402	0	1,231,624	28,297,797	29,529,421
June 30, 2087	0	233,068,814	233,068,814	0	1,110,481	29,781,478	30,891,959
June 30, 2088	0	240,060,878	240,060,878	0	993,401	31,332,315	32,325,716
June 30, 2089	0	247,262,704	247,262,704	0	881,232	32,952,415	33,833,647
June 30, 2090	0	254,680,585	254,680,585	0	774,680	34,638,757	35,413,437
June 30, 2091	0	262,321,003	262,321,003	0	674,448	36,399,273	37,073,721
June 30, 2092	0	270,190,633	270,190,633	0	581,093	38,239,180	38,820,273
June 30, 2093	0	278,296,352	278,296,352	0	495,070	40,160,833	40,655,903
June 30, 2094	0	286,645,243	286,645,243	0	416,683	42,168,427	42,585,110

## 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	514,133	1,770,876	50,000	1,820,876	0	1,770,876	1,770,876	7,156	571,289
June 30, 2021	571,289	1,943,746	45,453	1,989,199	0	1,943,746	1,943,746	13,548	630,290
June 30, 2022	630,290	2,139,202	41,507	2,180,709	0	2,139,202	2,139,202	16,273	688,070
June 30, 2023	688,070	2,334,756	37,885	2,372,641	0	2,334,756	2,334,756	17,672	743,627
June 30, 2024	743,627	2,484,319	34,787	2,519,106	0	2,484,319	2,484,319	19,023	797,437
June 30, 2025	797,437	2,658,592	31,928	2,690,520	0	2,658,592	2,658,592	20,333	849,698
June 30, 2026	849,698	2,802,529	29,300	2,831,829	0	2,802,529	2,802,529	21,606	900,604
June 30, 2027	900,604	3,001,742	26,820	3,028,562	0	3,001,742	3,001,742	22,848	950,272
June 30, 2028	950,272	3,169,524	24,564	3,194,088	0	3,169,524	3,169,524	24,062	998,898
June 30, 2029	998,898	3,244,110	22,573	3,266,683	0	3,244,110	3,244,110	25,253	1,046,724
June 30, 2030	1,046,724	3,416,148	20,716	3,436,864	0	3,416,148	3,416,148	26,425	1,093,865
June 30, 2031	1,093,865	3,592,789	19,005	3,611,794	0	3,592,789	3,592,789	27,583	1,122,519
June 30, 2032	1,122,519	3,695,308	17,571	3,712,879	0	3,695,308	3,695,308	28,281	1,126,929
June 30, 2033	1,126,929	3,742,967	16,209	3,759,176	0	3,742,967	3,742,967	28,375	1,097,248
June 30, 2034	1,097,248	3,859,990	14,936	3,874,926	0	3,859,990	3,859,990	27,617	1,019,269
June 30, 2035	1,019,269	3,924,027	13,773	3,937,800	0	3,924,027	3,924,027	25,653	881,497
June 30, 2036	881,497	3,971,289	12,747	3,984,036	0	3,971,289	3,971,289	22,196	693,770
June 30, 2037	693,770	4,046,608	11,691	4,058,299	0	4,046,608	4,046,608	17,489	444,155
June 30, 2038	444,155	4,159,095	10,733	4,169,828	0	4,159,095	4,159,095	11,237	123,673
June 30, 2039	123,673	4,220,098	9,948	4,230,046	0	4,220,098	4,220,098	3,215	13,163
June 30, 2040	13,163	4,246,705	9,179	4,255,884	0	4,246,705	4,246,705	443	9,622
June 30, 2041	9,622	4,349,750	8,473	4,358,223	0	4,349,750	4,349,750	346	8,819
June 30, 2042	8,819	4,419,342	7,816	4,427,158	0	4,419,342	4,419,342	318	8,134
June 30, 2043	8,134	4,414,332	7,246	4,421,578	0	4,414,332	4,414,332	293	7,539
June 30, 2044	7,539	4,475,686	6,622	4,482,308	0	4,475,686	4,475,686	271	6,893
June 30, 2045	6,893	4,558,554	6,078	4,564,632	0	4,558,554	4,558,554	248	6,326
June 30, 2046	6,326	4,546,671	5,546	4,552,217	0	4,546,671	4,546,671	227	5,773
June 30, 2047	5,773	4,560,137	5,072	4,565,209	0	4,560,137	4,560,137	207	5,279
June 30, 2048	5,279	4,565,452	4,547	4,569,999	0	4,565,452	4,565,452	188	4,735
June 30, 2049	4,735	4,487,869	4,062	4,491,931	0	4,487,869	4,487,869	169	4,231
June 30, 2050	4,231	4,472,721	3,639	4,476,360	0	4,472,721	4,472,721	151	3,790
June 30, 2051	3,790	4,410,404	3,192	4,413,596	0	4,410,404	4,410,404	134	3,326
June 30, 2052	3,326	4,346,748	2,791	4,349,539	0	4,346,748	4,346,748	118	2,909
June 30, 2053	2,909	4,336,454	2,428	4,338,882	0	4,336,454	4,336,454	103	2,531
June 30, 2054	2,531	4,353,234	2,045	4,355,279	0	4,353,234	4,353,234	89	2,134
June 30, 2055	2,134	4,335,345	1,720	4,337,065	0	4,335,345	4,335,345	75	1,795
June 30, 2056	1,795	4,283,016	1,409	4,284,425	0	4,283,016	4,283,016	62	1,471
June 30, 2057	1,471	4,200,235	1,120	4,201,355	0	4,200,235	4,200,235	51	1,171
June 30, 2058	1,171	4,120,640	876	4,121,516	0	4,120,640	4,120,640	40	916
June 30, 2059	916	4,012,430	679	4,013,109	0	4,012,430	4,012,430	31	710

## 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	710	3,908,943	513	3,909,456	0	3,908,943	3,908,943	24	537
June 30, 2061	537	3,803,796	365	3,804,161	0	3,803,796	3,803,796	18	383
June 30, 2062	383	3,719,557	230	3,719,787	0	3,719,557	3,719,557	12	242
June 30, 2063	242	3,655,678	132	3,655,810	0	3,655,678	3,655,678	8	140
June 30, 2064	140	3,579,399	80	3,579,479	0	3,579,399	3,579,399	4	84
June 30, 2065	84	3,506,090	43	3,506,133	0	3,506,090	3,506,090	3	46
June 30, 2066	46	3,433,466	18	3,433,484	0	3,433,466	3,433,466	1	19
June 30, 2067	19	3,356,437	4	3,356,441	0	3,356,437	3,356,437	1	5
June 30, 2068	5	3,274,076	0	3,274,076	0	3,274,076	3,274,076	0	0
June 30, 2069	0	3,186,938	0	3,186,938	0	3,186,938	3,186,938	0	0
June 30, 2070	0	3,096,140	0	3,096,140	0	3,096,140	3,096,140	0	0
June 30, 2071	0	3,001,623	0	3,001,623	0	3,001,623	3,001,623	0	0
June 30, 2072	0	2,903,377	0	2,903,377	0	2,903,377	2,903,377	0	0
June 30, 2073	0	2,801,380	0	2,801,380	0	2,801,380	2,801,380	0	0
June 30, 2074	0	2,695,665	0	2,695,665	0	2,695,665	2,695,665	0	0
June 30, 2075	0	2,586,249	0	2,586,249	0	2,586,249	2,586,249	0	0
June 30, 2076	0	2,473,309	0	2,473,309	0	2,473,309	2,473,309	0	0
June 30, 2077	0	2,357,048	0	2,357,048	0	2,357,048	2,357,048	0	0
June 30, 2078	0	2,237,680	0	2,237,680	0	2,237,680	2,237,680	0	0
June 30, 2079	0	2,115,657	0	2,115,657	0	2,115,657	2,115,657	0	0
June 30, 2080	0	1,991,340	0	1,991,340	0	1,991,340	1,991,340	0	0
June 30, 2081	0	1,865,165	0	1,865,165	0	1,865,165	1,865,165	0	0
June 30, 2082	0	1,737,790	0	1,737,790	0	1,737,790	1,737,790	0	0
June 30, 2083	0	1,609,909	0	1,609,909	0	1,609,909	1,609,909	0	0
June 30, 2084	0	1,482,319	0	1,482,319	0	1,482,319	1,482,319	0	0
June 30, 2085	0	1,355,881	0	1,355,881	0	1,355,881	1,355,881	0	0
June 30, 2086	0	1,231,624	0	1,231,624	0	1,231,624	1,231,624	0	0
June 30, 2087	0	1,110,481	0	1,110,481	0	1,110,481	1,110,481	0	0
June 30, 2088	0	993,401	0	993,401	0	993,401	993,401	0	0
June 30, 2089	0	881,232	0	881,232	0	881,232	881,232	0	0
June 30, 2090	0	774,680	0	774,680	0	774,680	774,680	0	0
June 30, 2091	0	674,448	0	674,448	0	674,448	674,448	0	0
June 30, 2092	0	581,093	0	581,093	0	581,093	581,093	0	0
June 30, 2093	0	495,070	0	495,070	0	495,070	495,070	0	0
June 30, 2094	0	416,683	0	416,683	0	416,683	416,683	0	0

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

### BENEFIT PAYMENT PROJECTION DISCLOSURES

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

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments for Current Plan Members	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments [II. - III.]	V. Present Value of Funded Benefit Payments using the Long-Term Rate of Return [2.50%]	VI. Present Value of Unfunded Benefit Payments using the Municipal Bond Rate [2.66%]	VII. Present Value of Benefit Payments using the Single Equivalent Discount Rate [2.65%]	
June 30, 2020	514,133	1,770,876	514,133	1,256,743	514,133	1,256,743	1,770,876	Sum of Column V.
June 30, 2021	571,289	1,943,746	571,289	1,372,457	557,355	1,336,892	1,893,505	13,008,822
June 30, 2022	630,290	2,139,202	630,290	1,508,912	599,919	1,431,724	2,030,045	
June 30, 2023	688,070	2,334,756	688,070	1,646,686	638,941	1,521,963	2,158,352	Sum of Column VI.
June 30, 2024	743,627	2,484,319	743,627	1,740,692	673,689	1,567,158	2,237,253	97,605,343
June 30, 2025	797,437	2,658,592	797,437	1,861,155	704,818	1,632,192	2,332,311	
June 30, 2026	849,698	2,802,529	849,698	1,952,831	732,692	1,668,211	2,395,035	Sum of Column VII.
June 30, 2027	900,604	3,001,742	900,604	2,101,138	757,647	1,748,392	2,498,976	[V. + VI.]
June 30, 2028	950,272	3,169,524	950,272	2,219,252	779,932	1,798,823	2,570,453	110,614,165
June 30, 2029	998,898	3,244,110	998,898	2,245,212	799,846	1,772,707	2,562,938	
June 30, 2030	1,046,724	3,416,148	1,046,724	2,369,424	817,699	1,822,301	2,629,094	
June 30, 2031	1,093,865	3,592,789	1,093,865	2,498,924	833,684	1,872,096	2,693,569	
June 30, 2032	1,122,519	3,695,308	1,122,519	2,572,789	834,656	1,877,487	2,698,821	
June 30, 2033	1,126,929	3,742,967	1,126,929	2,616,038	817,497	1,859,579	2,662,970	
June 30, 2034	1,097,248	3,859,990	1,097,248	2,762,742	776,552	1,912,972	2,675,245	
June 30, 2035	1,019,269	3,924,027	1,019,269	2,904,758	703,770	1,959,187	2,649,331	
June 30, 2036	881,497	3,971,289	881,497	3,089,792	593,798	2,029,985	2,611,937	
June 30, 2037	693,770	4,046,608	693,770	3,352,838	455,942	2,145,725	2,592,682	
June 30, 2038	444,155	4,159,095	444,155	3,714,940	284,777	2,315,853	2,595,876	
June 30, 2039	123,673	4,220,098	123,673	4,096,425	77,361	2,487,493	2,565,870	
June 30, 2040	13,163	4,246,705	13,163	4,233,542	8,033	2,504,139	2,515,308	
June 30, 2041	9,622	4,349,750	9,622	4,340,128	5,729	2,500,661	2,509,749	
June 30, 2042	8,819	4,419,342	8,819	4,410,523	5,123	2,475,370	2,483,994	
June 30, 2043	8,134	4,414,332	8,134	4,406,198	4,610	2,408,861	2,417,046	
June 30, 2044	7,539	4,475,686	7,539	4,468,147	4,168	2,379,430	2,387,297	
June 30, 2045	6,893	4,558,554	6,893	4,551,661	3,718	2,361,093	2,368,650	
June 30, 2046	6,326	4,546,671	6,326	4,540,345	3,329	2,294,192	2,301,411	
June 30, 2047	5,773	4,560,137	5,773	4,554,364	2,964	2,241,643	2,248,565	
June 30, 2048	5,279	4,565,452	5,279	4,560,173	2,644	2,186,340	2,192,999	
June 30, 2049	4,735	4,487,869	4,735	4,483,134	2,314	2,093,707	2,100,012	
June 30, 2050	4,231	4,472,721	4,231	4,468,490	2,017	2,032,791	2,038,827	
June 30, 2051	3,790	4,410,404	3,790	4,406,614	1,763	1,952,696	1,958,456	
June 30, 2052	3,326	4,346,748	3,326	4,343,422	1,509	1,874,819	1,880,299	
June 30, 2053	2,909	4,336,454	2,909	4,333,545	1,288	1,822,084	1,827,360	
June 30, 2054	2,531	4,353,234	2,531	4,350,703	1,093	1,781,896	1,787,015	
June 30, 2055	2,134	4,335,345	2,134	4,333,211	899	1,728,743	1,733,672	
June 30, 2056	1,795	4,283,016	1,795	4,281,221	738	1,663,742	1,668,476	
June 30, 2057	1,471	4,200,235	1,471	4,198,764	590	1,589,416	1,593,935	
June 30, 2058	1,171	4,120,640	1,171	4,119,469	458	1,518,990	1,523,312	
June 30, 2059	916	4,012,430	916	4,011,514	350	1,440,853	1,444,969	

## 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 [2.50%]	VI. Present Value of Unfunded Benefit Payments using the Municipal Bond Rate [2.66%]	VII. Present Value of Benefit Payments using the Single Equivalent Discount Rate [2.65%]
June 30, 2060	710	3,908,943	710	3,908,233	264	1,367,381	1,371,315
June 30, 2061	537	3,803,796	537	3,803,259	195	1,296,173	1,299,937
June 30, 2062	383	3,719,557	383	3,719,174	136	1,234,671	1,238,292
June 30, 2063	242	3,655,678	242	3,655,436	84	1,182,066	1,185,569
June 30, 2064	140	3,579,399	140	3,579,259	47	1,127,440	1,130,826
June 30, 2065	84	3,506,090	84	3,506,006	28	1,075,748	1,079,036
June 30, 2066	46	3,433,466	46	3,433,420	15	1,026,178	1,029,372
June 30, 2067	19	3,356,437	19	3,356,418	6	977,168	980,269
June 30, 2068	5	3,274,076	5	3,274,071	2	928,494	931,499
June 30, 2069	0	3,186,938	0	3,186,938	0	880,364	883,271
June 30, 2070	0	3,096,140	0	3,096,140	0	833,119	835,927
June 30, 2071	0	3,001,623	0	3,001,623	0	786,757	789,461
June 30, 2072	0	2,903,377	0	2,903,377	0	741,285	743,883
June 30, 2073	0	2,801,380	0	2,801,380	0	696,710	699,198
June 30, 2074	0	2,695,665	0	2,695,665	0	653,045	655,422
June 30, 2075	0	2,586,249	0	2,586,249	0	610,303	612,566
June 30, 2076	0	2,473,309	0	2,473,309	0	568,527	570,673
June 30, 2077	0	2,357,048	0	2,357,048	0	527,763	529,791
June 30, 2078	0	2,237,680	0	2,237,680	0	488,052	489,961
June 30, 2079	0	2,115,657	0	2,115,657	0	449,481	451,269
June 30, 2080	0	1,991,340	0	1,991,340	0	412,106	413,773
June 30, 2081	0	1,865,165	0	1,865,165	0	375,992	377,538
June 30, 2082	0	1,737,790	0	1,737,790	0	341,237	342,664
June 30, 2083	0	1,609,909	0	1,609,909	0	307,934	309,243
June 30, 2084	0	1,482,319	0	1,482,319	0	276,183	277,374
June 30, 2085	0	1,355,881	0	1,355,881	0	246,079	247,157
June 30, 2086	0	1,231,624	0	1,231,624	0	217,735	218,704
June 30, 2087	0	1,110,481	0	1,110,481	0	191,231	192,095
June 30, 2088	0	993,401	0	993,401	0	166,637	167,401
June 30, 2089	0	881,232	0	881,232	0	143,990	144,660
June 30, 2090	0	774,680	0	774,680	0	123,300	123,882
June 30, 2091	0	674,448	0	674,448	0	104,565	105,066
June 30, 2092	0	581,093	0	581,093	0	87,757	88,183
June 30, 2093	0	495,070	0	495,070	0	72,828	73,187
June 30, 2094	0	416,683	0	416,683	0	59,709	60,007

## APPENDIX II – PLAN PROVISIONS

### Plan Year

July 1 through June 30.

### Premium Effective Date

**Medicare Supplement Plans:** effective July 1, 2020

**Non-Medicare Plans:** effective July 1, 2020

**Dental Plans:** N/A

### Creditable Service

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

### Benefits Offered

Comprehensive Medical Insurance offered through Harvard Pilgrim & Blue Cross Blue Shield of Massachusetts and \$1,000 of Group Term Life Insurance.

### Medicare Part B

Medicare Part B Premium reimbursements by the Town were not reflected in this valuation.

Medicare Part B Penalty reimbursements have been reflected.

### Surviving Spouse Coverage

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

## APPENDIX II – PLAN PROVISIONS

### Eligibility

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

### Participant Contributions

Group	Individual	Two-Person / Family
Medical	50%	50%
Dental	100%	100%
Life	50%	N/A



### APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

#### Pre-Retirement Mortality

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

#### Post-Retirement Mortality

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

#### Disabled Mortality

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

#### Assumption Experience Study

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

#### Discount Rate

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

#### Net Long Term Rate of Return

2.50% (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.

<b>Impact of Implicit Subsidy</b>		
	<b>As of the Measurement Date</b>	
<b>Impact on Liability</b>	<b><u>June 30, 2020</u></b>	<b><u>June 30, 2019</u></b>
I. Total OPEB Liability	78,236,198	81,124,133
II. Total OPEB Liability (Excluding Implicit Subsidy)	<u>66,772,743</u>	<u>71,891,548</u>
III. Liability from Implicit Subsidy [I. - II.]	11,463,455	9,232,585

  

	<b>For the Measurement Period Ending</b>	
<b>Impact on Payments</b>	<b><u>June 30, 2020</u></b>	<b><u>June 30, 2019</u></b>
IV. Employer Payments (Including Implicit Subsidy)	1,770,876	1,715,869
V. Actual Employer Payments	<u>1,388,583</u>	<u>1,435,737</u>
VI. Implicit Subsidy [IV. - V.]	382,293	280,132

### 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	4,910	3,096	44 & Under	10,086	6,609	65 to 69	6,796	6,796
25 to 29	7,244	3,221	45 to 49	11,079	8,345	70 to 74	6,796	6,796
30 to 34	9,154	4,043	50 to 54	13,033	10,990	75 to 79	6,796	6,796
35 to 39	9,430	5,076	55 to 59	15,066	14,288	80 to 84	6,796	6,796
40 to 44	9,652	6,324	60 to 64	17,928	18,335	85 to 89	6,796	6,796
45 to 49	10,602	7,986	65 to 69	21,491	22,870	90 & Over	6,796	6,796
50 to 54	12,472	10,517	70 to 74	25,343	27,407			
55 to 59	14,417	13,673	75 to 79	29,432	32,369			
60 to 64	17,156	17,545	80 to 84	33,746	37,206			
65 to 69	20,566	21,885	85 to 89	38,521	42,587			
70 & Over	24,252	26,227	90 & Over	38,521	42,587			

\*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
<b>A. Average Age at Hire</b>	35.81	36.52
<b>B. Average Service</b>	<u>11.18</u>	<u>11.03</u>
<b>C. Average Current Age</b>	46.99	47.55

### Retired Employees & Spouses

Valuation Date	July 1, 2019	July 1, 2017
<b>A. Under Age 65</b>	35	38
<b>B. Age 65 &amp; Over</b>	<u>278</u>	<u>250</u>
<b>C. Total</b>	313	288

### 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	11									11
25-29	44	1								45
30-34	27	23	1							51
35-39	25	15	10	4						54
40-44	20	10	8	5	1					44
45-49	11	9	10	17	11	1				59
50-54	11	21	7	9	11	7	1			67
55-59	6	11	12	15	9	1	4	1		59
60-64	7	3	6	18	12	8	2			56
65-69	3	5	2	3	5	1	1			20
70+			1	1	2	3			3	10
<b>Total</b>	165	98	57	72	51	21	8	1	3	476



## APPENDIX IV – PLAN DEMOGRAPHICS

### Plan Offerings

	Number of Contracts			
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
Master Health Plus	1		1	2
HMO Blue	98		196	294
Harvard Pilgrim	42		87	129
Medex	106	69		175
Total	247	69	284	600

	Per Contract Costs (monthly)		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Master Health Plus	2,532.94		6,284.72
HMO Blue	952.89		2,480.44
Harvard Pilgrim	952.89		2,480.43
Medex	591.84	1,183.68	
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.