

**Town of Westford
Other Postemployment Benefits Plan**

GASB 74 & GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2017

As of the Measurement Date:
June 30, 2019

For the Reporting Date:
June 30, 2019

Delivered September 24, 2019



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September 24, 2019

Personal and Confidential

Mr. Dan O'Donnell
Budget Director
Town of Westford
55 Main Street
Westford, MA 01886

Dear Mr. O'Donnell:

We have performed an actuarial valuation of the Town of Westford Other Postemployment Benefits Plan for the Reporting Date & fiscal year ending June 30, 2019 with a Measurement Date of June 30, 2019 and a Valuation Date of July 1, 2017. The figures presented in this report reflect the adoption, by the Town of Westford, 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

September 24, 2019

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Westford other postemployment benefit programs with a Valuation Date of July 1, 2017 with a Measurement Date of June 30, 2019 for the Reporting Date & fiscal year ending June 30, 2019 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.



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

EXECUTIVE SUMMARY

What caused plan liabilities to change from FY 18 to FY 19?

For the year ending on the Measurement Date of June 30, 2019, the Plan saw no experience because this is an interim valuation. During the period there was an investment gain of \$34,605 above the expected return.

Assumption changes

- ✓ None

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.

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 2.79% as of June 30, 2019.
- ✓ Current Asset Level – The Town had \$5,985,052 of assets as of June 30, 2019.
- ✓ Funding Policy - The Town is expected to contribute the service cost of employees hired after January 1, 2012
- ✓ Investment Policy - The Town is expected to earn 6.36% on assets based on its investment policy.

EXECUTIVE SUMMARY

Recognition Period

- ✓ Changes in assumptions & plan experience are amortized into the net OPEB expense over time until fully recognized
- ✓ Changes in benefit terms are to be recognized in full immediately

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare integrated) plans - represent 72.33% 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 5.00% per year for non-Medicare integrated plans and 5.00% per year for Medicare integrated plans.
- ✓ Discount Rate (5.75%) – 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 23 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.

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, 2017	July 1, 2017
Measurement Date & Period Ending	June 30, 2019	July 1, 2017
Reporting Date/Fiscal Year End	June 30, 2019	June 30, 2018
Total OPEB Liability	81,267,779	83,134,715
Per Eligible Active Plan Participant	48,473	51,928
Per Retiree/Spouse Plan Participant	62,625	59,268
Total Annual Service Cost (annual benefit accrual)	2,874,731	2,623,099
Per Eligible Active Plan Participant	2,796	2,552
Expected Employer Share of Retiree Costs	2,485,694	2,042,259
Per Retiree/Spouse Plan Participant	4,952	4,068
Net OPEB Liability as a % of Covered Payroll	123.90%	138.90%
Average Annual Medical Plan Premium (Single Coverage)	8,205	7,814
Average Annual Medical Plan Premium (Family Coverage)	26,505	25,243
<u>Projected 2022 Excise Tax Thresholds</u>		
Annual Medical Plan Premium (Single Coverage)	12,511	
Annual Medical Plan Premium (Family Coverage)	32,676	

PRINCIPAL RESULTS OF THE VALUATION

Town of Westford

Assuming Funding - 5.75% discount rate

Comparison of Plan Liabilities to Prior Valuation

Valuation Date	July 1, 2017	July 1, 2017
For the Measurement Period ending on the Measurement Date of:	June 30, 2019	July 1, 2017
For the Reporting Period & Fiscal Year ending on:	June 30, 2019	June 30, 2018
I. Total OPEB Liability		
A. Actives	49,829,945	53,382,184
B. Retirees/Disabled	<u>31,437,834</u>	<u>29,752,531</u>
C. Total	81,267,779	83,134,715
II. Fiduciary Net Position [Plan Assets]	5,985,052	3,559,027
III. Net OPEB Liability (Asset) [I. - II.]	75,282,727	79,575,688
IV. Funded Ratio [II. / I.]	7.36%	4.28%
V. Number of Eligible Participants		
A. Actives	1,028	1,028
B. Retirees/Disabled & Dependents	<u>502</u>	<u>502</u>
C. Total	1,530	1,530
VI. Service Cost	2,874,731	2,623,099
VII. Financial Statement Expense	8,521,089	7,322,216
VIII. Employer Contribution to the OPEB Trust	(1,072,641)	(1,120,254)
IX. Deferred Inflow of Resources	(31,128)	(4,592)
X. Deferred Outflow of Resources	7,168,552	8,658,895
XI. Money Weighted Rate of Return	6.63%	14.69%
XII. 20-year Municipal Bond Rate (SAPIHG)	2.79%	3.13%
XIII. Expected Long Term Rate of Return (Net of Expense)	6.36%	5.16%
XIV. Crossover Year	2067	2057
XV. Discount Rate	5.75%	4.75%

PRINCIPAL RESULTS OF THE VALUATION

Town of Westford Plan Liabilities as of the June 30, 2019 Measurement Date Assuming Funding - 5.75% discount rate

	Town Employees and Retirees	School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Water Enterprise Employees and Retirees	Ambulance Enterprise Employees and Retirees	Recreation Enterprise Employees and Retirees	Total
I. Total OPEB Liability								
A. Actives	4,720,166	36,687,487	3,652,632	3,164,427	843,168	255,292	506,773	49,829,945
B. Retirees/Disabled	<u>6,621,822</u>	<u>24,506,006</u>	<u>0</u>	<u>0</u>	<u>310,006</u>	<u>0</u>	<u>0</u>	<u>31,437,834</u>
C. Total	11,341,988	61,193,493	3,652,632	3,164,427	1,153,174	255,292	506,773	81,267,779
II. Fiduciary Net Position [Plan Assets]	726,819	3,921,409	234,068	202,783	899,973	0	0	5,985,052
III. Net OPEB Liability (Asset) [I. - II.]	10,615,169	57,272,084	3,418,564	2,961,644	253,201	255,292	506,773	75,282,727
IV. Number of Eligible Participants								
A. Actives	93	801	57	34	15	9	19	1,028
B. Retirees/Disabled	<u>88</u>	<u>411</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>502</u>
C. Total	181	1,212	57	34	18	9	19	1,530
For the Reporting Date and Fiscal Year Ending June 30, 2019								
V. Service Cost	223,798	2,246,781	204,317	102,333	34,003	17,754	45,745	2,874,731
VI. Financial Statement Expense	687,668	6,805,543	484,152	339,994	77,916	38,462	87,354	8,521,089
VII. Employer Share of Costs	(474,268)	(1,957,125)	(5,988)	(12,228)	(31,545)	(3)	(4,537)	(2,485,694)
VIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(151,524)	(817,518)	(48,798)	(42,275)	(12,526)	0	0	(1,072,641)
IX. Total Employer Contribution [VII. + VIII.]	(625,792)	(2,774,643)	(54,786)	(54,503)	(44,071)	(3)	(4,537)	(3,558,335)

PRINCIPAL RESULTS OF THE VALUATION

Town of Westford

Assuming Funding - 5.75% discount rate

For the Period ending on the June 30, 2019 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	17,439,333	26,978,619	44,417,952	2,160,915	19,061,857	21,222,772	65,640,724
B. Spouses	<u>8,965,806</u>	<u>18,510,063</u>	<u>27,475,869</u>	<u>1,371,502</u>	<u>8,843,560</u>	<u>10,215,062</u>	<u>37,690,931</u>
C. Total	26,405,139	45,488,682	71,893,821	3,532,417	27,905,417	31,437,834	103,331,655
Total OPEB Liability							
A. Participants	12,439,894	18,269,192	30,709,086	2,160,915	19,061,857	21,222,772	51,931,858
B. Spouses	<u>6,517,413</u>	<u>12,603,446</u>	<u>19,120,859</u>	<u>1,371,502</u>	<u>8,843,560</u>	<u>10,215,062</u>	<u>29,335,921</u>
C. Total	18,957,307	30,872,638	49,829,945	3,532,417	27,905,417	31,437,834	81,267,779
Service Cost							
A. Participants	622,647	1,163,145	1,785,792	0	0	0	1,785,792
B. Spouses	<u>305,535</u>	<u>783,404</u>	<u>1,088,939</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,088,939</u>
C. Total	928,182	1,946,549	2,874,731	0	0	0	2,874,731

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 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, 2019	
Description	Amount
I. Service Cost	2,874,731
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	4,487,338
III. Deferred (Inflows)/Outflows from Plan Design Changes*	0
IV. Deferred (Inflows)/Outflows from Plan Experience**	1,490,343
V. Deferred (Inflows)/Outflows from Changes of Assumptions**	0
VI. Projected earnings on OPEB plan investments	(323,254)
VII. Deferred (Inflows)/Outflows from Earnings on Plan Investments***	(8,069)
VIII. Financial statement expense [I. + II.+ III. + IV. + V. + VI. + VII.]	8,521,089

* Recognized Immediately

** Amortized over 6.81 years

*** Amortized over 5.00 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 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, 2018	83,134,715	3,559,027	79,575,688
II. Prior Period Adjustment	<u>(6,743,311)</u>	<u>995,525</u>	<u>(7,738,836)</u>
III. Balances for June 30, 2018 with Adjustment [I. + II.]	76,391,404	4,554,552	71,836,852
Changes for the year:			
IV. Service Cost	2,874,731	0	2,874,731
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	4,487,338	0	4,487,338
VI. Changes in Benefit terms *	0	0	0
VII. Change in assumptions **	0	0	0
VIII. Differences between actual and expected experience **	0	0	0
IX. Net investment income	0	357,859	(357,859)
X. Employer contributions to Trust	0	3,558,335	(3,558,335)
XI. Benefit payments withdrawn from Trust	0	(2,485,694)	2,485,694
XII. Benefit payments excluding Implicit Cost	(2,126,291)	0	(2,126,291)
XIII. Implicit Cost amount	(359,403)	0	(359,403)
XIV. Total Benefit payments including Implicit Cost [XII. + XIII.]	(2,485,694)	0	(2,485,694)
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.]	<u>4,876,375</u>	<u>1,430,500</u>	<u>3,445,875</u>
XVIII. Balances at June 30, 2019 [III.+XVII.]	81,267,779	5,985,052	75,282,727

* Recognized Immediately

** Amortized over 6.81 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 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	2019	2020	2021	2022	2023	2024
2017									
2018	10,149,238	6.81	7,168,552	1,490,343	1,490,343	1,490,343	1,490,343	1,490,343	1,207,180
2019	0	6.81	0	0	0	0	0	0	0
2020									
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			7,168,552						
Net increase (decrease) in OPEB expense				1,490,343	1,490,343	1,490,343	1,490,343	1,490,343	1,207,180

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	2019	2020	2021	2022	2023	2024
2017									
2018	0	6.81	0	0	0	0	0	0	0
2019	0	6.81	0	0	0	0	0	0	0
2020									
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			0						
Net increase (decrease) in OPEB expense				0	0	0	0	0	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 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	Recognition	Remaining	2019	2020	2021	2022	2023	2024
	actual & expected earnings								
2017									
2018	(5,740)	5.00	(3,444)	(1,148)	(1,148)	(1,148)	(1,148)		
2019	(34,605)	5.00	(27,684)	(6,921)	(6,921)	(6,921)	(6,921)	(6,921)	
2020									
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			(31,128)						
Net increase (decrease) in OPEB expense				(8,069)	(8,069)	(8,069)	(8,069)	(6,921)	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 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, 2019 to be reported for the fiscal year ending June 30, 2019		
	Deferred Outflows of Resources	Deferred Inflows of Resources
I. Differences between actual & expected experience	7,168,552	0
II. Changes of assumptions	0	0
III. Net difference between projected & actual earnings on OPEB plan investments	0	(31,128)
IV. Total [I.+II.+III.]	7,168,552	(31,128)
Annual Amortization of Deferred (Inflows)/Outflows		
The balance of deferred (inflows)/outflows as of June 30, 2019 will be recognized in future years as shown below.		
	Year ending June 30:	
	2020	1,482,274
	2021	1,482,274
	2022	1,482,274
	2023	1,483,422
	2024	1,207,180
	Thereafter	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 Measurement Date)

4. 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, 2019 Measurement Date, total Town premiums plus implicit costs for the retiree medical program were \$2,485,694. The Town also made a contribution to an OPEB Trust of \$1,072,641 for a total contribution during the measurement period of \$3,558,335 to be reported on the financial statement for the fiscal year ending June 30, 2019.

5. 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	44.00%	Domestic Equity - Large Cap	4.00%
Domestic Equity - Small/Mid Cap	6.75%	Domestic Equity - Small/Mid Cap	6.00%
International Equity - Developed Market	9.50%	International Equity - Developed Market	4.50%
International Equity-Emerging Market	3.50%	International Equity-Emerging Market	7.00%
Domestic Fixed Income	14.00%	Domestic Fixed Income	2.00%
International Fixed Income	0.75%	International Fixed Income	3.00%
Alternatives	7.75%	Alternatives	6.50%
Real Estate	3.50%	Real Estate	6.25%
Cash & Cash Equivalents	10.25%	Cash & Cash Equivalents	0.00%
Total	<u>100.00%</u>		
		I. Real Rate of Return*	<u>3.86%</u>
		II. Inflation Assumption	2.75%
		III. Total Nominal Return [I. + II.]	6.61%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	<u>6.36%</u>

*Geometric Mean

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 Measurement Date)

6. Schedule of The Town's Contributions

<u>Year</u>	<u>Actuarial Determined Contribution</u>	<u>Contributions in relation to the actuarially determined contribution</u>	<u>Contribution deficiency (excess)</u>	<u>Covered employee payroll</u>	<u>Contributions as a percentage of covered employee payroll</u>
June 30, 2019	7,908,973	(3,558,335)	4,350,638	60,760,942	5.86%
June 30, 2018	8,017,242	(3,245,991)	4,771,251	57,273,016	5.67%
June 30, 2017	3,162,513	(3,162,513)	0	57,373,661	5.51%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 Measurement Date)

7. Effect of 1% Change in Healthcare Trend

<u>Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2019 Measurement Date</u>			
	<u>1% Decrease</u>	<u>Current Trend Rate</u>	<u>1% Increase</u>
I. Total OPEB Liability	62,353,944	81,267,779	105,308,323
II. Fiduciary Net Position	<u>5,985,052</u>	<u>5,985,052</u>	<u>5,985,052</u>
III. Net OPEB Liability (Asset) [I.-II.]	56,368,892	75,282,727	99,323,271
IV. Service Cost	1,909,441	2,874,731	4,171,542

8. Effect of 1% Change in Discount Rates

<u>Impact of a 1% Change in the Discount Rate as of the June 30, 2019 Measurement Date</u>			
	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
I. Total OPEB Liability	94,230,756	81,267,779	70,894,817
II. Fiduciary Net Position	<u>5,985,052</u>	<u>5,985,052</u>	<u>5,985,052</u>
III. Net OPEB Liability (Asset) [I.-II.]	88,245,704	75,282,727	64,909,765
IV. Service Cost	3,671,162	2,874,731	2,278,664

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 Measurement Date)

9. Money Weighted Rate of Return

	Plan	Periods	Period
	Investments /	Invested	Weight
	Net External		
	Cash Flows		
I. Beginning value - June 30, 2018	4,554,552	12	1.0000
Monthly net external cash flows:			
July	872,641	11	0.9167
August	0	10	0.8333
September	0	9	0.7500
October	0	8	0.6667
November	0	7	0.5833
December	0	6	0.5000
January	0	5	0.4167
February	0	4	0.3333
March	200,000	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	1,072,641		
III. Earnings and increase in fair value	357,859		
IV. Ending value - June 30, 2019 [I.+II.+III.]	5,985,052		
Money Weighted Rate of Return	6.63%		
Asset Value - June 30, 2019	5,985,052		

EXHIBIT A
FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 Measurement Date)

10. OPEB Liability, OPEB Expense

	Fiscal Year Ending June 30, 2019							Total
	Town Employees and Retirees	School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Water Enterprise Employees and Retirees	Ambulance Enterprise Employees and Retirees	Recreation Enterprise Employees and Retirees	
I. Total OPEB Liability as of June 30, 2019	11,341,988	61,193,493	3,652,632	3,164,427	1,153,174	255,292	506,773	81,267,779
II. Fiduciary Net Position as of June 30, 2019	726,819	3,921,409	234,068	202,783	899,973	0	0	5,985,052
III. Net OPEB Liability (Asset) as of June 30, 2019 [I. - II.]	10,615,169	57,272,084	3,418,564	2,961,644	253,201	255,292	506,773	75,282,727
IV. Service Cost	223,798	2,246,781	204,317	102,333	34,003	17,754	45,745	2,874,731
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	296,722	3,656,617	226,056	191,038	68,564	16,026	32,315	4,487,338
VI. Projected Earnings on OPEB Plan Investments	(39,869)	(214,775)	(12,889)	(11,135)	(44,586)	0	0	(323,254)
VII. Net Recognition of Deferred (Inflows)/Outflows	207,017	1,116,920	66,668	57,758	19,935	4,682	9,294	1,482,274
VIII. Expense Related to Change in Benefit Terms	0	0	0	0	0	0	0	0
IX. Financial Statement Expense [IV. + V. + VI. + VII. + VIII.]	687,668	6,805,543	484,152	339,994	77,916	38,462	87,354	8,521,089
X. Employer Share of Costs	(474,268)	(1,957,125)	(5,988)	(12,228)	(31,545)	(3)	(4,537)	(2,485,694)
XI. Employer (Payments) Withdrawals to/from OPEB Trust	(151,524)	(817,518)	(48,798)	(42,275)	(12,526)	0	0	(1,072,641)
XII. Total Employer Contribution [X. + XI.]	(625,792)	(2,774,643)	(54,786)	(54,503)	(44,071)	(3)	(4,537)	(3,558,335)
XIII. Net OPEB Expense [IX. + XII.]	61,876	4,030,900	429,366	285,491	33,845	38,459	82,817	4,962,754

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 Measurement Date)

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

Valuation Date	July 1, 2017
For the Measurement Period ending on the Measurement Date of:	June 30, 2019
For the Reporting Period & Fiscal Year ending on:	June 30, 2019
Source of Deferred Inflow/Outflow	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	7,168,552
II. Deferred (Inflow)/Outflow from Investment Experience	(31,128)
III. Deferred (Inflow)/Outflow from Changes in Assumptions	0
Change in Deferred Inflow/Outflow	
I. Deferred Outflow at the beginning of the period	8,658,895
II. Deferred Outflow created during the period	0
III. Deferred Outflow recognized during the period	1,490,343
IV. Change in Deferred Outflow (II. - III.)	(1,490,343)
V. Deferred Outflow at end of the period (I. + IV.)	7,168,552
VI. Deferred Inflow at the beginning of the period	(4,592)
VII. Deferred Inflow created during the period	(34,605)
VIII. Deferred Inflow recognized during the period	(8,069)
IX. Change in Deferred Inflow (VII. - VIII.)	(26,536)
X. Deferred Inflow at end of the period (VI. + IX.)	(31,128)
Net OPEB Liability	
I. Net OPEB Liability at beginning of period	71,836,852
II. Service Cost	2,874,731
III. Interest on Total OPEB Liability, Service Cost, and Payments	4,487,338
IV. Projected Investment Income	(323,254)
V. Total Employer Contributions	(3,558,335)
VI. Expense Related to Change in Benefit Terms	0
VII. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V. + VI.)	3,480,480
VIII. Deferred Outflow created during the period	0
IX. Deferred Inflow created during the period	(34,605)
X. Net OPEB Liability at end of period (I. + VII. + VIII. + IX.)	75,282,727
Net OPEB Expense	
I. Service Cost	2,874,731
II. Interest on Total OPEB Liability, Service Cost, and Payments	4,487,338
III. Projected Investment Income	(323,254)
IV. Recognition of Deferred (Inflow)/Outflow	1,482,274
V. Expense Related to Change in Benefit Terms	0
VI. Financial Statement Expense (I. + II. + III. + IV. + V.)	8,521,089
VII. Benefit Payments	(2,485,694)
VIII. Contributions to Trust	(1,072,641)
IX. Total Employer Payments (VII. + VIII.)	(3,558,335)
X. Total Net OPEB Expense under GASB 75 (VI. + IX.)	4,962,754

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2019 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, 2019</u>	For the Fiscal Year Ending:	
		<u>June 30, 2018</u>	<u>June 30, 2017</u>
I. Actuarial Determined Contribution	7,908,973	8,017,242	3,162,513
II. Contributions in relation to the actuarially determined contribution	<u>(3,558,335)</u>	<u>(3,245,991)</u>	<u>(3,162,513)</u>
III. Contribution deficiency / (excess) [I. + II.]	<u>4,350,638</u>	<u>4,771,251</u>	<u>0</u>
Covered employee payroll	60,760,942	57,273,016	57,373,661
Contributions as a % of covered employee payroll	5.86%	5.67%	5.51%
Discount Rate	5.75%	5.75%	4.75%
Money Weighted Rate of Return	6.63%	<u>(0.12%)</u>	14.69%

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION (As of the June 30, 2019 Measurement Date)

Schedule of Changes in the Town's Net OPEB Liability and Related Ratios			
Valuation Date	July 1, 2017	July 1, 2017	July 1, 2017
For the Reporting Period & Fiscal Year ending on:	June 30, 2019	June 30, 2018	June 30, 2017
Total OPEB Liability	81,267,779	76,391,404	83,134,715
I. Service Cost	2,874,731	2,695,924	3,379,477
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	4,487,338	4,871,606	3,932,112
III. Changes in Benefit terms	0	0	0
IV. Difference between Expected & Actual Plan Experience	0	0	(2,545,735)
V. Changes of assumptions	0	(12,065,335)	0
VI. Benefit Payments Excluding Implicit Cost	(2,126,291)	(1,926,448)	N/A
VII. Implicit Cost Amount	(359,403)	(319,058)	N/A
VIII. Total Benefit payments including Implicit Cost [VI.+VII.]	<u>(2,485,694)</u>	<u>(2,245,506)</u>	<u>(2,042,259)</u>
IX. Net Change in OPEB liability [I.+II.+III.+IV.+V.+VIII.]	4,876,375	(6,743,311)	2,723,595
X. Total OPEB liability - beginning of period	76,391,404	83,134,715	80,411,120
XI. Total OPEB liability - end of period [IX.+X.]	81,267,779	76,391,404	83,134,715
Plan Fiduciary Net Position	5,985,052	4,554,552	3,559,027
XII. Earning from Plan Investments	357,859	(4,960)	152,263
XIII. Employer Contribution to trust	3,558,335	3,245,991	3,162,513
XIV. Benefit payments from trust, including refunds of member contributions	(2,485,694)	(2,245,506)	(2,042,259)
XV. Administrative expense	0	0	0
XVI. Other	0	0	0
XVII. Net change in plan fiduciary net position [XII.+XIII.+XIV.+XV.+XVI.]	1,430,500	995,525	1,272,517
XVIII. Plan fiduciary net position - beginning of period	4,554,552	3,559,027	2,286,510
XIX. Plan fiduciary net position - end of period [XVII.+XVIII.]	5,985,052	4,554,552	3,559,027
XX. Net OPEB Liability [XI.-XIX.]	75,282,727	71,836,852	79,575,688
XXI. Plan fiduciary net position as % of total OPEB liability [XIX. / XI.]	7.36%	5.96%	4.28%
XXII. Covered employee payroll	60,760,942	57,273,016	57,373,661
XXIII. Plan NOL as % of covered employee payroll [XX. / XXII.]	123.90%	125.43%	138.70%
Single Discount Rate to calculate Plan Liabilities	5.75%	5.75%	4.75%

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2019 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of July 1, 2017.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, June 30, 2019.

Actuarial Assumptions:

Investment Rate of Return:	6.36%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate	2.79% as of June 30, 2019 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
Single Equivalent Discount Rate:	5.75%, net of OPEB plan investment expense, including inflation.
Inflation:	2.75% as of June 30, 2019 and for future periods
Salary Increases:	3.00% annually as of June 30, 2019 and for future periods
Cost of Living Adjustment:	Not Applicable

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2019 Measurement Date)

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

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2019 Measurement Date)

Plan Membership

At July 1, 2017, OPEB plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits:	502
Active Employees:	<u>1,028</u>
Total:	1,530

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, 2018 to June 30, 2019

✓ None

Contributions:

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town contributed \$1,072,641 beyond the pay-as-you-go cost for the period ending on the June 30, 2019 Measurement Date. For the year ending on the June 30, 2019 Measurement Date total Town premiums plus implicit costs for the retiree medical program were \$2,485,694. \$359,403 of the \$2,485,694 represents implicit cost.

APPENDIX I - LIABILITIES, ASSETS, & CASH FLOWS

CURRENT FUNDING POLICY (OPEN GROUP)

Funding - 5.75% discount rate

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with an expected 6.36% return	III. Net OPEB Liability (Asset) [I. - II.]	IV. Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Excess Employer Payments (beyond claims)	VIII. Total Employer Payments [VI. + VII.]
2019	June 30, 2019	81,267,779	5,985,052	75,282,727	7.36%	2,874,731	2,485,694	1,072,641	3,558,335
2020	June 30, 2020	85,984,485	7,626,416	78,358,069	8.87%	3,015,892	2,709,299	1,222,440	3,931,739
2021	June 30, 2021	91,110,749	9,586,612	81,524,137	10.52%	3,164,459	2,893,050	1,430,371	4,323,421
2022	June 30, 2022	96,480,579	11,891,623	84,588,956	12.33%	3,324,042	3,097,605	1,643,834	4,741,439
2023	June 30, 2023	102,070,279	14,589,236	87,481,043	14.29%	3,491,020	3,348,075	1,882,369	5,230,444
2024	June 30, 2024	107,944,045	17,733,005	90,211,040	16.43%	3,669,916	3,555,130	2,148,621	5,703,751
2025	June 30, 2025	114,049,984	21,382,892	92,667,092	18.75%	3,844,327	3,809,172	2,445,500	6,254,672
2026	June 30, 2026	120,395,711	25,352,769	95,042,942	21.06%	4,029,858	4,115,244	2,530,690	6,645,934
2027	June 30, 2027	126,949,378	29,666,069	97,283,309	23.37%	4,205,631	4,428,212	2,618,868	7,047,080
2028	June 30, 2028	133,673,894	34,347,816	99,326,078	25.70%	4,415,926	4,772,119	2,710,131	7,482,250
2029	June 30, 2029	140,457,970	39,424,732	101,033,238	28.07%	4,601,762	5,256,131	2,804,584	8,060,715
2030	June 30, 2030	147,289,472	44,925,360	102,364,112	30.50%	4,811,426	5,728,039	2,902,343	8,630,382
2031	June 30, 2031	154,139,294	50,880,177	103,259,117	33.01%	5,041,771	6,197,396	3,003,524	9,200,920
2032	June 30, 2032	161,021,670	57,321,724	103,699,946	35.60%	5,278,380	6,754,149	3,108,249	9,862,398
2033	June 30, 2033	168,262,950	64,284,737	103,978,213	38.20%	5,529,317	7,336,008	3,216,639	10,552,647
2034	June 30, 2034	175,637,657	71,806,294	103,831,363	40.88%	5,804,036	7,668,098	3,328,823	10,996,921
2035	June 30, 2035	183,299,054	79,925,968	103,373,086	43.60%	6,076,933	8,071,413	3,444,933	11,516,346
2036	June 30, 2036	191,365,372	88,685,992	102,679,380	46.34%	6,378,908	8,419,527	3,565,109	11,984,636
2037	June 30, 2037	200,033,110	98,131,428	101,901,682	49.06%	6,697,606	8,701,389	3,689,490	12,390,879
2038	June 30, 2038	208,912,910	108,310,356	100,602,554	51.84%	7,037,514	9,021,216	3,818,221	12,839,437
2039	June 30, 2039	218,081,344	119,274,072	98,807,272	54.69%	7,367,834	9,501,845	3,951,458	13,453,303
2040	June 30, 2040	227,825,296	131,077,299	96,747,997	57.53%	7,748,162	9,887,449	4,089,359	13,976,808
2041	June 30, 2041	238,058,093	143,778,407	94,279,686	60.40%	8,142,298	10,409,165	4,232,086	14,641,251
2042	June 30, 2042	248,765,624	157,439,657	91,325,967	63.29%	8,571,673	11,047,983	4,379,812	15,427,795
2043	June 30, 2043	260,015,505	172,127,442	87,888,063	66.20%	9,022,513	11,633,358	4,532,705	16,166,063
2044	June 30, 2044	271,802,414	187,912,573	83,889,841	69.14%	9,502,517	12,071,618	4,690,953	16,762,571
2045	June 30, 2045	284,412,209	204,870,553	79,541,656	72.03%	10,000,657	12,521,915	4,854,739	17,376,654
2046	June 30, 2046	297,935,548	223,081,884	74,853,664	74.88%	10,530,348	13,067,922	5,024,255	18,092,177
2047	June 30, 2047	312,324,413	242,632,399	69,692,014	77.69%	11,090,402	13,392,184	5,199,705	18,591,889
2048	June 30, 2048	327,616,669	263,613,605	64,003,064	80.46%	11,667,212	13,895,294	5,381,298	19,276,592
2049	June 30, 2049	343,860,590	286,123,043	57,737,547	83.21%	12,280,266	14,410,181	5,569,241	19,979,422
2050	June 30, 2050	361,286,723	310,264,698	51,022,025	85.88%	12,931,425	14,938,317	5,763,767	20,702,084

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

ALTERNATIVE FUNDING SCENARIO (OPEN GROUP)

6.50% discount rate and funding increasing at 3.00% per year

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net	III. Net OPEB	IV. Funded	V. Service Cost	VI. Employer	VII. Annual Funding / (Payments)	VIII. Total
			Position as of Measurement Date with expected 6.36% return	Liability (Asset) ("NOL") [I. - II.]	Ratio [II. / I.]		Share of Premiums / Claims		Employer Payments [VI. + VII.]
2019	June 30, 2019	64,789,427	5,985,052	58,804,375	9.24%	2,272,307	2,485,694	1,072,641	3,558,335
2020	June 30, 2020	69,058,942	8,968,312	60,090,630	12.99%	2,419,774	2,709,299	2,523,597	5,232,896
2021	June 30, 2021	73,501,802	12,219,385	61,282,417	16.62%	2,542,209	2,893,050	2,599,305	5,492,355
2022	June 30, 2022	78,123,713	15,677,227	62,446,486	20.07%	2,670,219	3,097,605	2,677,284	5,774,889
2023	June 30, 2023	82,987,574	19,435,408	63,552,166	23.42%	2,807,441	3,348,075	2,757,603	6,105,678
2024	June 30, 2024	88,097,651	23,515,443	64,582,208	26.69%	2,950,084	3,555,130	2,840,331	6,395,461
2025	June 30, 2025	93,423,265	27,940,287	65,482,978	29.91%	3,102,689	3,809,172	2,925,541	6,734,713
2026	June 30, 2026	99,038,625	32,734,428	66,304,197	33.05%	3,250,710	4,115,244	3,013,307	7,128,551
2027	June 30, 2027	104,890,329	37,923,991	66,966,338	36.16%	3,408,428	4,428,212	3,103,706	7,531,918
2028	June 30, 2028	110,974,560	43,536,839	67,437,721	39.23%	3,555,782	4,772,119	3,196,817	7,968,936
2029	June 30, 2029	117,265,738	49,602,691	67,663,047	42.30%	3,733,307	5,256,131	3,292,722	8,548,853
2030	June 30, 2030	123,718,914	56,153,239	67,565,675	45.39%	3,886,865	5,728,039	3,391,504	9,119,543
2031	June 30, 2031	130,203,210	63,222,276	66,980,934	48.56%	4,060,441	6,197,396	3,493,249	9,690,645
2032	June 30, 2032	136,699,948	70,845,835	65,854,113	51.83%	4,251,643	6,754,149	3,598,046	10,352,195
2033	June 30, 2033	143,171,806	79,062,330	64,109,476	55.22%	4,447,781	7,336,008	3,705,987	11,041,995
2034	June 30, 2034	149,606,679	87,912,715	61,693,964	58.76%	4,656,228	7,668,098	3,817,167	11,485,265
2035	June 30, 2035	156,303,634	97,440,646	58,862,988	62.34%	4,885,827	8,071,413	3,931,682	12,003,095
2036	June 30, 2036	163,105,684	107,692,653	55,413,031	66.03%	5,113,063	8,419,527	4,049,632	12,469,159
2037	June 30, 2037	170,143,905	118,718,331	51,425,574	69.78%	5,365,016	8,701,389	4,171,121	12,872,510
2038	June 30, 2038	177,538,982	130,570,535	46,968,447	73.54%	5,631,608	9,021,216	4,296,255	13,317,471
2039	June 30, 2039	185,513,380	143,305,591	42,207,789	77.25%	5,916,288	9,501,845	4,425,143	13,926,988
2040	June 30, 2040	193,688,554	156,983,520	36,705,034	81.05%	6,191,424	9,887,449	4,557,897	14,445,346
2041	June 30, 2041	202,101,494	171,668,276	30,433,218	84.94%	6,508,926	10,409,165	4,694,634	15,103,799
2042	June 30, 2042	211,058,081	187,428,001	23,630,080	88.80%	6,838,328	11,047,983	4,835,473	15,883,456
2043	June 30, 2043	220,417,292	204,335,293	16,081,999	92.70%	7,197,613	11,633,358	4,980,537	16,613,895
2044	June 30, 2044	230,132,033	222,467,494	7,664,539	96.67%	7,574,693	12,071,618	5,129,953	17,201,571
2045	June 30, 2045	240,276,815	241,906,998	(1,630,183)	100.68%	7,975,944	12,521,915	5,283,852	17,805,767
2046	June 30, 2046	250,912,975	262,741,572	(11,828,597)	104.71%	8,392,239	13,067,922	0	13,067,922
2047	June 30, 2047	262,282,879	279,451,936	(17,169,057)	106.55%	8,834,165	13,392,184	0	13,392,184
2048	June 30, 2048	274,451,734	297,225,079	(22,773,345)	108.30%	9,301,011	13,895,294	0	13,895,294
2049	June 30, 2049	287,467,930	316,128,594	(28,660,664)	109.97%	9,781,551	14,410,181	0	14,410,181
2050	June 30, 2050	301,319,705	336,234,373	(34,914,668)	111.59%	10,291,968	14,938,317	0	14,938,317
2051	June 30, 2051	316,070,882	357,618,879	(41,547,997)	113.15%	10,833,459	15,584,464	0	15,584,464
2052	June 30, 2052	331,917,548	380,363,440	(48,445,892)	114.60%	11,407,007	16,315,732	0	16,315,732
2053	June 30, 2053	348,664,189	404,554,555	(55,890,366)	116.03%	12,003,403	17,134,167	0	17,134,167
2054	June 30, 2054	366,436,308	430,284,225	(63,847,917)	117.42%	12,636,383	17,997,265	0	17,997,265
2055	June 30, 2055	385,219,479	457,650,302	(72,430,823)	118.80%	13,294,344	18,880,239	0	18,880,239
2056	June 30, 2056	404,931,421	486,756,861	(81,825,440)	120.21%	13,988,366	19,757,255	0	19,757,255
2057	June 30, 2057	425,901,761	517,714,597	(91,812,836)	121.56%	14,714,997	20,706,427	0	20,706,427
2058	June 30, 2058	448,172,313	550,641,245	(102,468,932)	122.86%	15,481,238	21,705,580	0	21,705,580

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES

Projection of Contributions using a July 1, 2017 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for		III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
	current employees	II. Payroll for future employees			Payments for current plan members		
June 30, 2019	60,760,942	0	60,760,942	0	2,485,694	0	2,485,694
June 30, 2020	58,625,850	3,957,920	62,583,770	0	2,709,299	0	2,709,299
June 30, 2021	57,169,974	7,291,309	64,461,283	0	2,893,050	0	2,893,050
June 30, 2022	55,971,795	10,423,326	66,395,121	0	3,097,605	0	3,097,605
June 30, 2023	54,871,265	13,515,710	68,386,975	0	3,348,075	0	3,348,075
June 30, 2024	53,870,198	16,568,386	70,438,584	0	3,555,130	0	3,555,130
June 30, 2025	52,998,618	19,553,124	72,551,742	0	3,809,172	0	3,809,172
June 30, 2026	52,184,051	22,544,243	74,728,294	0	4,115,244	0	4,115,244
June 30, 2027	51,554,184	25,415,959	76,970,143	0	4,428,212	0	4,428,212
June 30, 2028	50,505,529	28,773,718	79,279,247	0	4,772,119	0	4,772,119
June 30, 2029	49,574,150	32,083,474	81,657,624	0	5,216,311	39,820	5,256,131
June 30, 2030	48,245,389	35,861,964	84,107,353	0	5,623,532	104,507	5,728,039
June 30, 2031	46,753,982	39,876,592	86,630,574	0	5,999,101	198,295	6,197,396
June 30, 2032	45,249,217	43,980,274	89,229,491	0	6,430,438	323,711	6,754,149
June 30, 2033	43,586,758	48,319,618	91,906,376	0	6,857,557	478,451	7,336,008
June 30, 2034	41,986,021	52,677,546	94,663,567	0	7,065,658	602,440	7,668,098
June 30, 2035	40,406,691	57,096,783	97,503,474	0	7,322,447	748,966	8,071,413
June 30, 2036	38,532,879	61,895,699	100,428,578	0	7,506,034	913,493	8,419,527
June 30, 2037	36,713,591	66,727,844	103,441,435	0	7,647,551	1,053,838	8,701,389
June 30, 2038	34,907,202	71,637,476	106,544,678	0	7,808,778	1,212,438	9,021,216
June 30, 2039	33,076,419	76,664,599	109,741,018	0	8,075,007	1,426,838	9,501,845
June 30, 2040	30,960,197	82,073,052	113,033,249	0	8,170,912	1,716,537	9,887,449
June 30, 2041	29,012,715	87,411,531	116,424,246	0	8,327,589	2,081,576	10,409,165
June 30, 2042	26,944,847	92,972,126	119,916,973	0	8,521,230	2,526,753	11,047,983
June 30, 2043	24,972,933	98,541,549	123,514,482	0	8,589,203	3,044,155	11,633,358
June 30, 2044	22,961,663	104,258,253	127,219,916	0	8,587,160	3,484,458	12,071,618
June 30, 2045	21,153,148	109,883,365	131,036,513	0	8,540,160	3,981,755	12,521,915
June 30, 2046	19,118,528	115,849,080	134,967,608	0	8,544,305	4,523,617	13,067,922
June 30, 2047	17,329,542	121,687,094	139,016,636	0	8,365,361	5,026,823	13,392,184
June 30, 2048	15,774,134	127,413,001	143,187,135	0	8,320,215	5,575,079	13,895,294
June 30, 2049	13,890,735	133,592,014	147,482,749	0	8,222,419	6,187,762	14,410,181
June 30, 2050	12,188,688	139,718,543	151,907,231	0	8,067,128	6,871,189	14,938,317
June 30, 2051	10,446,450	146,017,998	156,464,448	0	7,961,353	7,623,111	15,584,464
June 30, 2052	8,978,717	152,179,664	161,158,381	0	7,863,872	8,451,860	16,315,732
June 30, 2053	7,513,000	158,480,132	165,993,132	0	7,776,606	9,357,561	17,134,167
June 30, 2054	6,374,252	164,598,674	170,972,926	0	7,724,901	10,272,364	17,997,265
June 30, 2055	5,231,624	170,870,490	176,102,114	0	7,628,363	11,251,876	18,880,239
June 30, 2056	4,202,639	177,182,538	181,385,177	0	7,467,211	12,290,044	19,757,255
June 30, 2057	3,204,032	183,622,700	186,826,732	0	7,335,692	13,370,735	20,706,427
June 30, 2058	2,484,361	189,947,173	192,431,534	0	7,193,835	14,511,745	21,705,580

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES (CONTINUED)

Projection of Contributions using a July 1, 2017 Valuation Date							
For the Period Ending on the Measurement Date	I. Payroll for		III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
	current employees	II. Payroll for future employees			Payments for current plan members		
June 30, 2059	1,878,560	196,325,920	198,204,480	0	7,002,133	15,725,994	22,728,127
June 30, 2060	1,406,221	202,744,393	204,150,614	0	6,854,492	17,022,999	23,877,491
June 30, 2061	968,283	209,306,849	210,275,132	0	6,690,623	18,404,193	25,094,816
June 30, 2062	653,428	215,929,958	216,583,386	0	6,486,076	19,876,684	26,362,760
June 30, 2063	373,534	222,707,354	223,080,888	0	6,309,396	21,443,381	27,752,777
June 30, 2064	176,265	229,597,050	229,773,315	0	6,118,301	23,070,579	29,188,880
June 30, 2065	63,641	236,602,873	236,666,514	0	5,897,990	24,784,126	30,682,116
June 30, 2066	17,928	243,748,581	243,766,509	0	5,676,098	26,589,387	32,265,485
June 30, 2067	13,583	251,065,921	251,079,504	0	5,445,296	28,469,590	33,914,886
June 30, 2068	4,034	258,607,855	258,611,889	0	5,206,175	30,436,647	35,642,822
June 30, 2069	0	266,370,246	266,370,246	0	4,959,563	32,499,976	37,459,539
June 30, 2070	0	274,361,353	274,361,353	0	4,707,832	34,663,776	39,371,608
June 30, 2071	0	282,592,194	282,592,194	0	4,451,724	36,931,869	41,383,593
June 30, 2072	0	291,069,960	291,069,960	0	4,194,353	39,311,215	43,505,568
June 30, 2073	0	299,802,059	299,802,059	0	3,975,459	41,808,773	45,784,232
June 30, 2074	0	308,796,121	308,796,121	0	3,762,486	44,426,184	48,188,670
June 30, 2075	0	318,060,005	318,060,005	0	3,542,118	47,163,163	50,705,281
June 30, 2076	0	327,601,805	327,601,805	0	3,316,546	50,030,281	53,346,827
June 30, 2077	0	337,429,859	337,429,859	0	3,086,900	53,030,567	56,117,467
June 30, 2078	0	347,552,755	347,552,755	0	2,855,914	56,165,019	59,020,933
June 30, 2079	0	357,979,338	357,979,338	0	2,625,498	59,444,022	62,069,520
June 30, 2080	0	368,718,718	368,718,718	0	2,397,929	62,879,248	65,277,177
June 30, 2081	0	379,780,280	379,780,280	0	2,176,034	66,475,326	68,651,360
June 30, 2082	0	391,173,688	391,173,688	0	1,960,097	70,246,154	72,206,251
June 30, 2083	0	402,908,899	402,908,899	0	1,753,128	74,203,076	75,956,204
June 30, 2084	0	414,996,166	414,996,166	0	1,555,469	78,353,437	79,908,906
June 30, 2085	0	427,446,051	427,446,051	0	1,369,346	82,704,034	84,073,380
June 30, 2086	0	440,269,433	440,269,433	0	1,195,164	87,269,573	88,464,737
June 30, 2087	0	453,477,516	453,477,516	0	1,034,307	92,061,156	93,095,463
June 30, 2088	0	467,081,841	467,081,841	0	886,425	97,084,899	97,971,324
June 30, 2089	0	481,094,296	481,094,296	0	752,176	102,358,766	103,110,942
June 30, 2090	0	495,527,125	495,527,125	0	631,733	107,894,760	108,526,493
June 30, 2091	0	510,392,939	510,392,939	0	524,711	113,708,503	114,233,214
June 30, 2092	0	525,704,727	525,704,727	0	431,026	119,814,847	120,245,873
June 30, 2093	0	541,475,869	541,475,869	0	350,302	126,231,295	126,581,597

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY NET POSITION PROJECTION DISCLOSURES

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2017 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Portion of Employer Contributions for Current Plan Members	III. Total Benefit Payments	IV. Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Investment Earnings	VIII. Ending Fiduciary Net Position for Current Plan Members
June 30, 2019	4,554,552	2,485,694	2,485,694	0	1,072,641	1,072,641	357,859	5,985,052
June 30, 2020	5,985,052	2,709,299	2,709,299	0	1,222,440	1,145,131	392,430	7,522,613
June 30, 2021	7,522,613	2,893,050	2,893,050	0	1,430,371	1,268,580	518,157	9,309,350
June 30, 2022	9,309,350	3,097,605	3,097,605	0	1,643,834	1,385,770	635,463	11,330,583
June 30, 2023	11,330,583	3,348,075	3,348,075	0	1,882,369	1,510,346	767,914	13,608,843
June 30, 2024	13,608,843	3,555,130	3,555,130	0	2,148,621	1,643,228	916,972	16,169,043
June 30, 2025	16,169,043	3,809,172	3,809,172	0	2,445,500	1,786,423	1,084,284	19,039,750
June 30, 2026	19,039,750	4,115,244	4,115,244	0	2,530,690	1,767,224	1,266,260	22,073,234
June 30, 2027	22,073,234	4,428,212	4,428,212	0	2,618,868	1,754,104	1,458,778	25,286,116
June 30, 2028	25,286,116	4,772,119	4,772,119	0	2,710,131	1,726,512	1,662,254	28,674,882
June 30, 2029	28,674,882	5,216,311	5,216,311	0	2,804,584	1,702,656	1,877,032	32,214,750
June 30, 2030	32,214,750	5,623,532	5,728,039	0	2,902,343	1,664,833	2,100,984	35,876,060
June 30, 2031	35,876,060	5,999,101	6,197,396	0	3,003,524	1,620,983	2,332,470	39,631,218
June 30, 2032	39,631,218	6,430,438	6,754,149	0	3,108,249	1,576,226	2,569,897	43,453,630
June 30, 2033	43,453,630	6,857,557	7,336,008	0	3,216,639	1,525,497	2,811,414	47,312,090
June 30, 2034	47,312,090	7,065,658	7,668,098	0	3,328,823	1,476,429	3,055,276	51,241,355
June 30, 2035	51,241,355	7,322,447	8,071,413	0	3,444,933	1,427,624	3,303,649	55,223,662
June 30, 2036	55,223,662	7,506,034	8,419,527	0	3,565,109	1,367,877	3,555,053	59,233,099
June 30, 2037	59,233,099	7,647,551	8,701,389	0	3,689,490	1,309,479	3,808,225	63,296,965
June 30, 2038	63,296,965	7,808,778	9,021,216	0	3,818,221	1,250,963	4,064,854	67,400,344
June 30, 2039	67,400,344	8,075,007	9,501,845	0	3,951,458	1,190,987	4,323,951	71,488,444
June 30, 2040	71,488,444	8,170,912	9,887,449	0	4,089,359	1,120,090	4,581,735	75,473,732
June 30, 2041	75,473,732	8,327,589	10,409,165	0	4,232,086	1,054,628	4,833,150	79,279,934
June 30, 2042	79,279,934	8,521,230	11,047,983	0	4,379,812	984,126	5,073,017	82,810,324
June 30, 2043	82,810,324	8,589,203	11,633,358	0	4,532,705	916,451	5,295,431	85,978,051
June 30, 2044	85,978,051	8,587,160	12,071,618	0	4,690,953	846,661	5,494,713	88,834,967
June 30, 2045	88,834,967	8,540,160	12,521,915	0	4,854,739	783,698	5,674,441	91,311,351
June 30, 2046	91,311,351	8,544,305	13,067,922	0	5,024,255	711,699	5,829,685	93,329,118
June 30, 2047	93,329,118	8,365,361	13,392,184	0	5,199,705	648,185	5,956,026	94,906,506
June 30, 2048	94,906,506	8,320,215	13,895,294	0	5,381,298	592,828	6,054,615	95,978,870
June 30, 2049	95,978,870	8,222,419	14,410,181	0	5,569,241	524,542	6,120,679	96,436,329
June 30, 2050	96,436,329	8,067,128	14,938,317	0	5,763,767	462,471	6,147,830	96,175,441
June 30, 2051	96,175,441	7,961,353	15,584,464	0	5,965,097	398,264	6,129,228	95,079,822
June 30, 2052	95,079,822	7,863,872	16,315,732	0	6,173,473	343,947	6,057,846	93,029,755
June 30, 2053	93,029,755	7,776,606	17,134,167	0	6,389,146	289,179	5,925,747	89,887,120
June 30, 2054	89,887,120	7,724,901	17,997,265	0	6,612,365	246,524	5,724,539	85,585,819
June 30, 2055	85,585,819	7,628,363	18,880,239	0	6,843,396	203,303	5,449,623	79,986,869
June 30, 2056	79,986,869	7,467,211	19,757,255	0	7,082,513	164,100	5,092,303	72,953,228
June 30, 2057	72,953,228	7,335,692	20,706,427	0	7,329,999	125,708	4,643,761	64,351,962
June 30, 2058	64,351,962	7,193,835	21,705,580	0	7,586,150	97,940	4,095,851	54,034,008

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY POSITION PROJECTION DISCLOSURES (CONTINUED)

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2017 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Portion of Employer Contributions for Current Plan Members	III. Total Benefit Payments	IV. Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Investment Earnings	VIII. Ending Fiduciary Net Position for Current Plan Members
June 30, 2059	54,034,008	7,002,133	22,728,127	0	7,851,268	74,413	3,438,893	47,064,468
June 30, 2060	47,064,468	6,854,492	23,877,491	0	8,125,660	55,971	2,995,053	40,230,607
June 30, 2061	40,230,607	6,690,623	25,094,816	0	8,409,657	38,725	2,559,879	33,551,772
June 30, 2062	33,551,772	6,486,076	26,362,760	0	8,703,596	26,259	2,134,715	27,072,136
June 30, 2063	27,072,136	6,309,396	27,752,777	0	9,007,823	15,083	1,722,260	20,765,624
June 30, 2064	20,765,624	6,118,301	29,188,880	0	9,322,699	7,152	1,320,918	14,648,336
June 30, 2065	14,648,336	5,897,990	30,682,116	0	9,648,595	2,595	931,715	8,750,597
June 30, 2066	8,750,597	5,676,098	32,265,485	0	9,985,894	734	556,561	3,074,540
June 30, 2067	3,074,540	5,445,296	33,914,886	0	10,335,002	559	195,558	196,117
June 30, 2068	196,117	5,206,175	35,642,822	0	10,696,331	167	12,478	12,645
June 30, 2069	12,645	4,959,563	37,459,539	0	11,070,303	0	804	804
June 30, 2070	804	4,707,832	39,371,608	0	11,457,366	0	51	51
June 30, 2071	51	4,451,724	41,383,593	0	11,857,972	0	3	3
June 30, 2072	3	4,194,353	43,505,568	0	12,272,602	0	0	0
June 30, 2073	0	3,975,459	45,784,232	0	12,701,744	0	0	0
June 30, 2074	0	3,762,486	48,188,670	0	13,145,908	0	0	0
June 30, 2075	0	3,542,118	50,705,281	0	13,605,616	0	0	0
June 30, 2076	0	3,316,546	53,346,827	0	14,081,414	0	0	0
June 30, 2077	0	3,086,900	56,117,467	0	14,573,863	0	0	0
June 30, 2078	0	2,855,914	59,020,933	0	15,083,549	0	0	0
June 30, 2079	0	2,625,498	62,069,520	0	15,611,077	0	0	0
June 30, 2080	0	2,397,929	65,277,177	0	16,157,065	0	0	0
June 30, 2081	0	2,176,034	68,651,360	0	16,722,165	0	0	0
June 30, 2082	0	1,960,097	72,206,251	0	17,307,043	0	0	0
June 30, 2083	0	1,753,128	75,956,204	0	17,912,389	0	0	0
June 30, 2084	0	1,555,469	79,908,906	0	18,538,922	0	0	0
June 30, 2085	0	1,369,346	84,073,380	0	19,187,386	0	0	0
June 30, 2086	0	1,195,164	88,464,737	0	19,858,544	0	0	0
June 30, 2087	0	1,034,307	93,095,463	0	20,553,193	0	0	0
June 30, 2088	0	886,425	97,971,324	0	21,272,155	0	0	0
June 30, 2089	0	752,176	103,110,942	0	22,016,283	0	0	0
June 30, 2090	0	631,733	108,526,493	0	22,786,454	0	0	0
June 30, 2091	0	524,711	114,233,214	0	23,583,583	0	0	0
June 30, 2092	0	431,026	120,245,873	0	24,408,609	0	0	0
June 30, 2093	0	350,302	126,581,597	0	25,262,509	0	0	0

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES

Actuarial Present Values of Projected Benefit Payments using a July 1, 2017 Valuation Date
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For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments	V. Present Value of Funded Benefit Payments	VI. Present Value of Unfunded Benefit Payments	VII. Present Value of
							Benefit Payments using Single Equivalent Discount Rate
June 30, 2019	4,554,552	2,485,694	2,485,694	0	2,485,694	0	2,485,694
June 30, 2020	5,985,052	2,709,299	2,709,299	0	2,547,291	0	2,565,134
June 30, 2021	7,522,613	2,893,050	2,893,050	0	2,557,404	0	2,593,357
June 30, 2022	9,309,350	3,097,605	3,097,605	0	2,574,489	0	2,628,970
June 30, 2023	11,330,583	3,348,075	3,348,075	0	2,616,266	0	2,690,344
June 30, 2024	13,608,843	3,555,130	3,555,130	0	2,611,944	0	2,704,714
June 30, 2025	16,169,043	3,809,172	3,809,172	0	2,631,241	0	2,743,782
June 30, 2026	19,039,750	4,115,244	4,115,244	0	2,672,682	0	2,806,518
June 30, 2027	22,073,234	4,428,212	4,428,212	0	2,703,969	0	2,859,261
June 30, 2028	25,286,116	4,772,119	4,772,119	0	2,739,721	0	2,917,359
June 30, 2029	28,674,882	5,216,311	5,216,311	0	2,815,660	0	3,019,223
June 30, 2030	32,214,750	5,623,532	5,623,532	0	2,853,958	0	3,081,726
June 30, 2031	35,876,060	5,999,101	5,999,101	0	2,862,505	0	3,112,607
June 30, 2032	39,631,218	6,430,438	6,430,438	0	2,884,844	0	3,158,871
June 30, 2033	43,453,630	6,857,557	6,857,557	0	2,892,496	0	3,189,436
June 30, 2034	47,312,090	7,065,658	7,065,658	0	2,802,062	0	3,111,360
June 30, 2035	51,241,355	7,322,447	7,322,447	0	2,730,254	0	3,052,861
June 30, 2036	55,223,662	7,506,034	7,506,034	0	2,631,352	0	2,962,883
June 30, 2037	59,233,099	7,647,551	7,647,551	0	2,520,650	0	2,858,114
June 30, 2038	63,296,965	7,808,778	7,808,778	0	2,419,886	0	2,763,080
June 30, 2039	67,400,344	8,075,007	8,075,007	0	2,352,753	0	2,705,244
June 30, 2040	71,488,444	8,170,912	8,170,912	0	2,238,338	0	2,591,715
June 30, 2041	75,473,732	8,327,589	8,327,589	0	2,144,846	0	2,500,859
June 30, 2042	79,279,934	8,521,230	8,521,230	0	2,063,482	0	2,422,843
June 30, 2043	82,810,324	8,589,203	8,589,203	0	1,955,568	0	2,312,220
June 30, 2044	85,978,051	8,587,160	8,587,160	0	1,838,194	0	2,188,663
June 30, 2045	88,834,967	8,540,160	8,540,160	0	1,718,816	0	2,060,860
June 30, 2046	91,311,351	8,544,305	8,544,305	0	1,616,821	0	1,952,147
June 30, 2047	93,329,118	8,365,361	8,365,361	0	1,488,303	0	1,809,562
June 30, 2048	94,906,506	8,320,215	8,320,215	0	1,391,756	0	1,704,028
June 30, 2049	95,978,870	8,222,419	8,222,419	0	1,293,153	0	1,594,391
June 30, 2050	96,436,329	8,067,128	8,067,128	0	1,192,864	0	1,481,042
June 30, 2051	96,175,441	7,961,353	7,961,353	0	1,106,829	0	1,383,848
June 30, 2052	95,079,822	7,863,872	7,863,872	0	1,027,902	0	1,294,170
June 30, 2053	93,029,755	7,776,606	7,776,606	0	955,712	0	1,211,708
June 30, 2054	89,887,120	7,724,901	7,724,901	0	892,589	0	1,139,604
June 30, 2055	85,585,819	7,628,363	7,628,363	0	828,727	0	1,065,481
June 30, 2056	79,986,869	7,467,211	7,467,211	0	762,711	0	987,474
June 30, 2057	72,953,228	7,335,692	7,335,692	0	704,473	0	918,463
June 30, 2058	64,351,962	7,193,835	7,193,835	0	649,540	0	852,775

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES (CONTINUED)

Actuarial Present Values of Projected Benefit Payments using a July 1, 2017 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments	V. Present Value of Funded Benefit Payments	VI. Present Value of Unfunded Benefit Payments	VII. Present Value of Benefit Payments using Single Equivalent Discount Rate
June 30, 2059	54,034,008	7,002,133	7,002,133	0	594,425	0	785,882
June 30, 2060	47,064,468	6,854,492	6,854,492	0	547,096	0	728,376
June 30, 2061	40,230,607	6,690,623	6,690,623	0	502,084	0	673,131
June 30, 2062	33,551,772	6,486,076	6,486,076	0	457,629	0	617,829
June 30, 2063	27,072,136	6,309,396	6,309,396	0	418,544	0	569,020
June 30, 2064	20,765,624	6,118,301	6,118,301	0	381,598	0	522,425
June 30, 2065	14,648,336	5,897,990	5,897,990	0	345,860	0	476,815
June 30, 2066	8,750,597	5,676,098	5,676,098	0	312,945	0	434,459
June 30, 2067	3,074,540	5,445,296	3,074,540	2,370,756	159,375	631,664	394,615
June 30, 2068	196,117	5,206,175	196,117	5,010,058	9,558	1,298,600	357,211
June 30, 2069	12,645	4,959,563	12,645	4,946,918	579	1,247,385	322,183
June 30, 2070	804	4,707,832	804	4,707,028	35	1,154,638	289,556
June 30, 2071	51	4,451,724	51	4,451,673	2	1,062,321	259,235
June 30, 2072	3	4,194,353	3	4,194,350	0	973,712	231,251
June 30, 2073	0	3,975,459	0	3,975,459	0	897,814	207,519
June 30, 2074	0	3,762,486	0	3,762,486	0	826,623	185,951
June 30, 2075	0	3,542,118	0	3,542,118	0	757,057	165,745
June 30, 2076	0	3,316,546	0	3,316,546	0	689,581	146,932
June 30, 2077	0	3,086,900	0	3,086,900	0	624,389	129,481
June 30, 2078	0	2,855,914	0	2,855,914	0	561,967	113,418
June 30, 2079	0	2,625,498	0	2,625,498	0	502,586	98,719
June 30, 2080	0	2,397,929	0	2,397,929	0	446,549	85,365
June 30, 2081	0	2,176,034	0	2,176,034	0	394,213	73,344
June 30, 2082	0	1,960,097	0	1,960,097	0	345,443	62,550
June 30, 2083	0	1,753,128	0	1,753,128	0	300,570	52,968
June 30, 2084	0	1,555,469	0	1,555,469	0	259,434	44,496
June 30, 2085	0	1,369,346	0	1,369,346	0	222,184	37,087
June 30, 2086	0	1,195,164	0	1,195,164	0	188,651	30,647
June 30, 2087	0	1,034,307	0	1,034,307	0	158,824	25,111
June 30, 2088	0	886,425	0	886,425	0	132,416	20,376
June 30, 2089	0	752,176	0	752,176	0	109,308	16,370
June 30, 2090	0	631,733	0	631,733	0	89,310	13,017
June 30, 2091	0	524,711	0	524,711	0	72,164	10,236
June 30, 2092	0	431,026	0	431,026	0	57,668	7,961
June 30, 2093	0	350,302	0	350,302	0	45,594	6,126

APPENDIX II – PLAN PROVISIONS

<u>Effective Date</u>	GASB 45 was adopted July 1, 2008 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, 2018 Non-Medicare Plans: effective November 1, 2017 Dental Plans: effective November 1, 2017
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Benefits Offered</u>	Comprehensive Medical and Dental Insurance offered through Fallon Healthcare as well as \$1,000 of Group Term Life Insurance.
<u>Excise Tax</u>	Under the Patient Protection and Affordable Care Act (“PPACA”), a 40% tax will be imposed on the cost of medical benefits in excess of a specified threshold.
<u>Medicare Part B</u>	The Town does not reimburse Medicare Part B. The Town does not reimburse Medicare Part B Penalties.
<u>Surviving Spouse Coverage</u>	Spousal benefits do not change after the death of a plan participant.

APPENDIX II – PLAN PROVISIONS

Eligibility

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

Participant Contributions

Group	Individual	Family
Medical	- 35% of premiums for HMO plans - 40% of premiums for PPO & Medicare Integrated plans.	- 35% of premiums for HMO plans - 40% of premiums for PPO & Medicare Integrated plans.
Dental	100%	100%
Life	50% of premiums	N/A

APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

<u>Pre-Retirement Mortality</u>	General: RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females Teacher: RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females
<u>Post-Retirement Mortality</u>	General: RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females Teachers: RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females
<u>Disabled Mortality</u>	General: RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB and a base year 2012 for males and females Teachers: RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB and a base year 2012 for males and females
<u>Assumption Experience Study</u>	The mortality assumptions reflect recent experience analysis published in 2014 (based on the years 2006-2011), updated to reflect data through January 1, 2015 for post-retirement mortality, and professional judgement. As such, mortality assumptions reflect observed current mortality as well as expected mortality improvements.
<u>Discount Rate</u>	5.75% per annum (previously 5.75%)
<u>Net Long Term Rate of Return</u>	6.36% (based on investment policy)
<u>Municipal Bond Rate</u>	2.79% as of June 30, 2019 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
<u>Actuarial Cost Method</u>	Individual Entry Age Normal
<u>Asset-Valuation Method</u>	Market Value of Assets as of the Measurement Date, June 30, 2019

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Excise Tax

The PPACA Excise tax is expected to take effect for tax years beginning after December 31, 2021. The projected 2022 threshold amounts are \$12,511 for single coverage and \$32,676 for family coverage. For qualified retirees and those engaged in high risk professions, a "kicker" amount of \$1,650 for single coverage and \$3,450 for family coverage is expected to be added to the above thresholds.

Employee Termination

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

Non-Public Safety Employees

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

Public Safety Employees

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

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Retirement Rates for Eligible Employees

Age	Standard Male	Standard Female	Male Teachers	Female Teachers	Public Safety
45 - 49	0.00%	0.00%	0.00%	0.00%	1.00%
50 - 51	1.00%	1.50%	2.00%	1.50%	2.00%
52	1.00%	2.50%	2.00%	1.50%	2.00%
53	1.00%	2.50%	2.00%	1.50%	5.00%
54	2.00%	2.50%	2.00%	2.00%	7.50%
55	2.00%	5.50%	6.00%	5.00%	15.00%
56	2.50%	6.50%	20.00%	15.00%	10.00%
57	2.50%	6.50%	40.00%	35.00%	10.00%
58	5.00%	6.50%	50.00%	35.00%	10.00%
59	6.50%	6.50%	50.00%	35.00%	15.00%
60	12.00%	5.00%	40.00%	35.00%	20.00%
61	20.00%	13.00%	40.00%	35.00%	20.00%
62	30.00%	15.00%	35.00%	35.00%	25.00%
63	25.00%	12.50%	35.00%	35.00%	25.00%
64	22.00%	18.00%	35.00%	35.00%	30.00%
65	40.00%	15.00%	35.00%	35.00%	100.00%
66	25.00%	20.00%	40.00%	35.00%	100.00%
67	25.00%	20.00%	40.00%	30.00%	100.00%
68	30.00%	25.00%	40.00%	30.00%	100.00%
69	30.00%	20.00%	40.00%	30.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
71	100.00%	100.00%	100.00%	100.00%	100.00%
72	100.00%	100.00%	100.00%	100.00%	100.00%

Permanent Disability Rates

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

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONSTrend Rate

Medicare Supplement Plans: Initial Trend of 5.00% for 2019 grading down 0.00% per year for an ultimate trend rate of 5.00%.

Non-Medicare Plans: Initial Trend of 5.00% for 2019 grading down 0.00% per year for an ultimate trend rate of 5.00%.

Dental Plans: Initial Trend of 5.00% for 2019 grading down 0.00% per year for an ultimate trend rate of 5.00%.

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.

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

2.75% 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, 2019</u>	<u>July 1, 2017</u>
I. Actuarial Accrued Liability	81,267,779	83,134,715
II. Actuarial Accrued Liability (Excluding Implicit Subsidy)	<u>73,741,065</u>	<u>75,189,340</u>
III. Liability from Implicit Subsidy [I. - II.]	7,526,714	7,945,375

	For the Measurement Period Ending	
Impact on Payments	<u>June 30, 2019</u>	<u>July 1, 2017</u>
IV. Employer Payments (Including Implicit Subsidy)	2,485,694	2,042,259
V. Actual Employer Payments	<u>2,126,291</u>	N/A
VI. Implicit Subsidy [IV. - V.]	359,403	N/A

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

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

ANNUAL PER CAPITA CLAIMS

ACTIVE EMPLOYEES		
Age Bracket	Female	Male
24 & Under	8,249	3,452
25 to 29	8,249	3,716
30 to 34	8,249	4,476
35 to 39	8,249	5,344
40 to 44	8,249	6,287
45 to 49	9,154	7,500
50 to 54	10,053	9,060
55 to 59	10,939	11,021
60 to 64	12,373	13,215
65 to 69	13,630	14,561
70 & Over	15,064	16,076

RETIREE - NOT MEDICARE ELIGIBLE		
Age Bracket	Female	Male
44 & Under	8,249	6,287
45 to 49	9,154	7,500
50 to 54	10,053	9,060
55 to 59	10,939	11,021
60 to 64	12,373	13,215
65 to 69	13,630	14,561
70 to 74	15,064	16,076
75 to 79	16,302	17,409
80 to 84	17,126	18,295
85 to 89	18,006	19,232
90 & Over	18,924	20,213

RETIREE - MEDICARE ELIGIBLE		
Age Bracket	Female	Male
65 to 69	3,833	4,095
70 to 74	4,237	4,521
75 to 79	4,585	4,896
80 to 84	4,817	5,145
85 to 89	5,064	5,409
90 & Over	5,322	5,685

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, 2019 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, 2017
A. Average Age at Hire	37.24
B. Average Service	<u>9.59</u>
C. Average Current Age	46.83

Retired Employees & Spouses

Valuation Date	July 1, 2017
A. Under Age 65	85
B. Age 65 & Over	<u>417</u>
C. Total	502

APPENDIX IV - PLAN DEMOGRAPHICS

Plan Offerings

	Number of Contracts			
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
Fallon Direct Premium	33		34	67
Fallon Direct Value	33		46	79
Fallon Select Premium	73		126	199
Fallon Select Value	70		186	256
Steward Community Premium	3		1	4
Steward Community Value	4		4	8
PPO	16		22	38
Fallon Companion Care	<u>112</u>	<u>144</u>		<u>256</u>
Total	344	144	419	907

Per Contract Costs (monthly)

	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Fallon Direct Premium	733.29		1,943.40
Fallon Direct Value	698.40		1,850.93
Fallon Select Premium	824.85		2,186.02
Fallon Select Value	785.61		2,082.02
Steward Community Premium	651.82		1,727.46
Steward Community Value	620.81		1,645.28
PPO	1,014.86		2,689.26
Fallon Companion Care	364.92	729.84	
MetLife Dental - High Option	54.87	110.78	157.90
MetLife Dental - Low Option	30.50	57.81	106.75

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 earning 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.