

**Town of Westford Other
Postemployment Benefits Plan**

GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2017

As of the Measurement Date:
July 1, 2017

As of the Measurement Date:
July 1, 2018

&

For the Reporting Date:
June 30, 2018

For the Reporting Date:
June 30, 2019

Delivered October 2, 2018

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October 2, 2018

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, 2018 with a Measurement Date of July 1, 2017 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 year 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 refer you to Section I of this report for a detailed summary and commentary on the results of the valuation and a comparison with the prior valuation. Section II is a summary of the plan provisions, and Section III describes the actuarial cost method and assumptions. Details for cost calculations, supporting data, and disclosures are provided in Exhibits A through C.

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

Very truly yours,



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

October 2, 2018ACTUARIAL 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 July 1, 2017 for the Reporting Date & fiscal year ending June 30, 2018 in accordance with generally accepted actuarial principles and practices. 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

GASB 74 and 75 Impact

The Town adopted GASB 74 for the fiscal year ending June 30, 2017 and GASB 75 for the fiscal year ending June 30, 2018. The adoption of GASB 74/75 introduces a new actuarial cost method and discount rate as well as new disclosures and methodologies for reporting plan liabilities and OPEB expenses. Significant changes have been made to the recognition of OPEB expenses, which makes the comparison of Net OPEB Expense in the current valuation to the expenses reported under GASB 45 misleading. The liability reported on the Town's balance sheet is likely to increase dramatically as GASB 74/75 require the recognition of liabilities immediately rather than over a 30 year period as GASB 45 allowed.

What caused plan liabilities to change from FY 17 to FY 18?

Plan experience was in line with expectation - for the year ending on the Measurement Date of July 1, 2017, the Plan saw an experience gain of \$1,966,821 or 2.85% of the beginning Total OPEB Liability ("TOL"). This was mainly due to premiums for non-Medicare integrated plans increasing by less than the expected 5%. This was mostly offset by premiums for Medicare integrated plans increasing by more than the expected 5%. The experience gain on TOL and the experience loss on assets are amortized into the net OPEB expense over time until fully recognized. Changes in assumptions increased disclosed liabilities by \$2.7 million.

Over the one year period, the TOL went from \$65,961,973 as of July 1, 2016 to \$71,725,416 as of July 1, 2017 for an increase of \$5,763,443. The Net OPEB Expense was \$3,058,316 for the year ending on the July 1, 2017 Measurement Date. As this is the first year using GASB 75 methodology, there is no baseline for comparison. For a projection of future costs and liabilities refer to Exhibit D.

EXECUTIVE SUMMARY

(continued)

Assumption changes

A key assumption has changed since the prior valuation - the impact is detailed below.

- ✓ Due to the GASB 75 standards the discount rate was changed from 6.00% to 5.75% increasing the disclosed liability by \$2.7 million.
- ✓ Assumption changes caused Normal Cost to increase by \$170 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.

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare Integrated) plans - represent 73% 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 5.0% per year
- ✓ 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

EXECUTIVE SUMMARY

(continued)

What is Implicit Subsidy? How does it impact us?

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.

Impact of Implicit Subsidy		
Impact on Liability	As of the Measurement Date	
	<u>July 1, 2017</u>	<u>July 1, 2016</u>
I. Actuarial Accrued Liability	71,725,416	65,961,973
II. Actuarial Accrued Liability (Excluding Implicit Subsidy)	<u>64,873,055</u>	<u>N/A</u>
III. Liability from Implicit Subsidy [I. - II.]	6,852,361	N/A

Impact on Payments	For the Measurement Period Ending	
	<u>July 1, 2017</u>	<u>July 1, 2016</u>
IV. Employer Payments (Including Implicit Subsidy)	2,042,259	2,042,259
V. Actual Employer Payments	<u>N/A</u>	<u>N/A</u>
VI. Implicit Subsidy [IV. - V.]	N/A	N/A

EXECUTIVE SUMMARY
(continued)

What are some 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, 2016
Measurement Date & Period Ending	July 1, 2017	July 1, 2016
Reporting Date/Fiscal Year End	June 30, 2018	June 30, 2017
Total OPEB Liability	71,725,416	65,961,973
Per Eligible Active Plan Participant	44,811	39,080
Per Retiree/Spouse Plan Participant	51,115	53,855
Total Annual Service Cost (annual benefit accrual)	2,623,099	2,422,785
Per Eligible Active Plan Participant	2,552	2,364
Expected Employer Share of Retiree Costs	2,042,259	2,042,259
Per Retiree/Spouse Plan Participant	4,068	4,246
Net OPEB Liability as a % of Payroll	119.00%	111.00%
Average Annual Medical Plan Premium (Single Coverage)	7,814	7,686
Average Annual Medical Plan Premium (Family Coverage)	25,243	24,974
<u>Projected 2022 Excise Tax Thresholds</u>		
Annual Medical Plan Premium (Single Coverage)	12,511	
Annual Medical Plan Premium (Family Coverage)	32,676	

EXECUTIVE SUMMARY

(continued)

Liabilities & Benefit Payments in today's dollars

With the growth of medical care costs over time, the nominal accrued liabilities ("TOL") and benefit payments can appear daunting. However, it is important to remember that a dollar paid in the future is worth less than a dollar paid today.

For the Period Ending on the Measurement Date of:	Number of Retirees, Spouses & Surviving Spouses	Present Value at 3.00% of Total OPEB Liability	Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"
July 1, 2017	502	71,725,416	2,042,259
July 1, 2022	635	83,014,742	2,672,021
July 1, 2027	735	94,189,527	3,295,006
July 1, 2032	853	103,047,024	4,335,231
July 1, 2037	920	110,475,285	4,817,748
July 1, 2042	955	118,609,429	5,276,578
July 1, 2047	976	128,548,529	5,517,402

A full projection of plan costs and liabilities in today's dollars is shown in Exhibit D of this report.

We have an "unfunded liability". How do we fund it? Can we fund it?

If you're looking to fund your OPEB liability, there are a variety of manner to do so. The amount of funding in combination with your Investment Policy will impact the discount rate and disclosed liabilities. Below are a few sample funding options, but it's important to develop a funding policy that fits your organization as each situation is different.

	Current Funding Policy	Alternative Funding Policy - Level Dollar	Alternative Funding Policy - Increasing 3.00% per Year
Net OPEB Liability	\$68,166,389	\$61,102,480	\$61,102,480
Trust Contribution made during Fiscal Year 2019	\$1,362,984	\$3,267,951	\$2,754,799
Discount Rate*	5.75%	6.50%	6.50%

*Final discount rate will be chosen based on liabilities and cash flows at each measurement date

SECTION I

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, 2016
For the Measurement Period ending on the Measurement Date of:	July 1, 2017	July 1, 2016
For the Reporting Period & Fiscal Year ending on:	June 30, 2018	June 30, 2017
I. Present Value of Future Benefits		
A. Actives	69,207,091	60,625,358
B. Retirees/Disabled	25,659,724	25,904,464
C. Total	94,866,815	86,529,822
II. Present Value of Future Normal Cost	23,141,399	20,567,849
III. Total OPEB Liability (Individual Entry Age Normal)		
A. Actives	46,065,692	40,057,509
B. Retirees/Disabled	25,659,724	25,904,464
C. Total	71,725,416	65,961,973
IV. Fiduciary Net Position [Plan Assets]	3,559,027	2,286,510
V. Net OPEB Liability (Asset) [III. - IV.]	68,166,389	63,675,463
VI. Funded Ratio [IV. / III.]	4.96%	3.47%
VII. Annual Covered Payroll	57,273,016	57,373,661
VIII. Net OPEB Liability (Asset) as % of Covered Payroll	119.0%	111.0%
IX. Number of Eligible Participants		
A. Actives	1,028	1,025
B. Retirees/Disabled	502	481
C. Total	1,530	1,506
X. Service Cost	2,623,099	2,422,785
XI. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	4,063,205	N/A
XII. Projected Earnings on OPEB Plan Investments	(182,761)	N/A
XIII. Net Recognition of Deferred (Inflows)/Outflows	(282,714)	N/A
XIV. Financial Statement Expense [X.+XI.+XII.+XIII.]	6,220,829	N/A
XV. Employer Share of Costs	(2,042,259)	(2,042,259)
XVI. Employer (Payments)/Withdrawals to/from OPEB Trust	(1,120,254)	(1,120,254)
XVII. Total Employer Contribution [XV. + XVI.]	(3,162,513)	(3,162,513)
XVIII. Other Changes	0	N/A
XIX. Net OPEB Expense [XIV.+XVII.+XVIII.]	3,058,316	N/A
XX. Discount Rate	5.75%	6.00%

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Town of Westford
Plan Liabilities as of the July 1, 2017 Measurement Date
Assuming Funding - 5.75% discount rate

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	67,845,357	0	46,312	1,315,422	69,207,091
B. Retirees/Disabled	<u>25,492,600</u>	<u>0</u>	<u>52,012</u>	<u>115,112</u>	<u>25,659,724</u>
C. Total	93,337,957	0	98,324	1,430,534	94,866,815
II. Present Value of Future Normal Cost	22,543,177	0	12,955	585,267	23,141,399
III. Total OPEB Liability					
A. Actives	45,302,180	0	33,357	730,155	46,065,692
B. Retirees/Disabled	<u>25,492,600</u>	<u>0</u>	<u>52,012</u>	<u>115,112</u>	<u>25,659,724</u>
C. Total	70,794,780	0	85,369	845,267	71,725,416
IV. Fiduciary Net Position [Plan Assets]	3,512,849	0	4,236	41,942	3,559,027
V. Net OPEB Liability (Asset) [III. - IV.]	67,281,931	0	81,133	803,325	68,166,389
VI. Annual Covered Payroll	57,273,016	57,273,016	57,273,016	57,273,016	57,273,016
VII. Net OPEB Liability (Asset) as % of Covered Payroll	117.5%	0.0%	0.1%	1.4%	119.0%
VIII. Number of Eligible Participants					
IX. A. Actives	1,028	1,831	1,888	1,888	
B. Retirees/Disabled	<u>502</u>	<u>0</u>	<u>217</u>	<u>1,001</u>	
C. Total	1,530	1,831	2,105	2,889	
For the Reporting Date and Fiscal Year Ending June 30, 2018					
X. Service Cost	2,569,505	0	1,760	51,834	2,623,099
XI. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	4,006,715	0	4,907	51,583	4,063,205
XII. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	(285,069)	0	(343)	(3,402)	(288,814)
XIV. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XV. Projected Earnings on OPEB Plan Investments	(180,389)	0	(218)	(2,154)	(182,761)
XVI. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>6,092</u>	<u>0</u>	<u>1</u>	<u>7</u>	<u>6,100</u>
XVII. Financial Statement Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.]	6,116,854	0	6,107	97,868	6,220,829
XVIII. Employer Share of Costs	(2,038,981)	0	(3,278)	0	(2,042,259)
XIX. Employer (Payments)/Withdrawals to/from OPEB Trust	(1,106,907)	0	(1,285)	(12,062)	(1,120,254)
XX. Total Employer Contribution [XVIII. + XIX.]	(3,145,888)	0	(4,563)	(12,062)	(3,162,513)
XXI. Other Changes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
XXII. Net OPEB Expense [XVII.+XX.+XXI.]	2,970,966	0	1,544	85,806	3,058,316

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Town of Westford
Plan Liabilities as of the July 1, 2017 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	Enterprise Employees and Retirees	Ambulance Enterprise Employees and Retirees	Recreation Enterprise Employees and Retirees	Total
I. Present Value of Future Benefits									
A. Actives	6,220,600	51,303,936	5,554,897	3,814,602	1,048,144	428,873	836,039		69,207,091
B. Retirees/Disabled	<u>5,399,366</u>	<u>20,007,348</u>	<u>0</u>	<u>0</u>	<u>253,010</u>	<u>0</u>	<u>0</u>		<u>25,659,724</u>
C. Total	11,619,966	71,311,284	5,554,897	3,814,602	1,301,154	428,873	836,039		94,866,815
II. Present Value of Future Normal Cost	1,718,478	17,467,433	2,209,314	905,001	271,499	196,492	373,182		23,141,399
III. Total OPEB Liability									
A. Actives	4,502,122	33,836,503	3,345,583	2,909,601	776,645	232,381	462,857		46,065,692
B. Retirees/Disabled	<u>5,399,366</u>	<u>20,007,348</u>	<u>0</u>	<u>0</u>	<u>253,010</u>	<u>0</u>	<u>0</u>		<u>25,659,724</u>
C. Total	9,901,488	53,843,851	3,345,583	2,909,601	1,029,655	232,381	462,857		71,725,416
IV. Fiduciary Net Position [Plan Assets]	425,242	2,073,921	128,006	112,453	819,405	0	0		3,559,027
V. Net OPEB Liability (Asset) [III. - IV.]	9,476,246	51,769,930	3,217,577	2,797,148	210,250	232,381	462,857		68,166,389
VI. Annual Covered Payroll	5,783,353	43,166,772	3,867,911	2,317,567	941,776	566,917	628,720		57,273,016
VII. Net OPEB Liability (Asset) as % of Covered Payroll	163.9%	119.9%	83.2%	120.7%	22.3%	41.0%	73.6%		119.0%
VIII. 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, 2018									
IX. Service Cost	204,506	2,050,343	185,919	93,409	31,047	16,150	41,725		2,623,099
X. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	548,701	3,052,599	195,860	166,274	58,055	13,799	27,917		4,063,205
XI. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0	0	0		0
XII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	(39,869)	(216,811)	(13,472)	(11,716)	(4,146)	(936)	(1,864)		(288,814)
XIII. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0	0	0		0
XIV. Projected Earnings on OPEB Plan Investments	(22,200)	(110,436)	(6,874)	(6,005)	(37,246)	0	0		(182,761)
XV. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>729</u>	<u>3,555</u>	<u>219</u>	<u>193</u>	<u>1,404</u>	<u>0</u>	<u>0</u>		<u>6,100</u>
XVI. Financial Statement Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.]	691,867	4,779,250	361,652	242,155	49,114	29,013	67,778		6,220,829
XVII. Employer Share of Costs	(389,665)	(1,607,983)	(4,919)	(10,046)	(25,916)	(3)	(3,727)		(2,042,259)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(152,195)	(851,348)	(55,437)	(47,014)	(14,260)	0	0		(1,120,254)
XIX. Total Employer Contribution [XVII. + XVIII.]	(541,860)	(2,459,331)	(60,356)	(57,060)	(40,176)	(3)	(3,727)		(3,162,513)
XX. Other Changes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>		<u>0</u>
XXI. Net OPEB Expense [XVI.+XIX.+XX.]	150,007	2,319,919	301,296	185,095	8,938	29,010	64,051		3,058,316

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Westford
Assuming Funding - 5.75% discount rate
For the Period ending on the July 1, 2017 Measurement Date

	<u>Present Value of Future</u> <u>Benefits</u>	<u>Total OPEB Liability</u> <u>(Individual Entry Age</u> <u>Normal)</u>	<u>Service Cost</u>
Actives			
Under Age 65			
A. Participants	19,458,373	11,500,166	568,145
B. Spouses	<u>10,003,821</u>	<u>6,025,078</u>	<u>278,791</u>
C. Total	29,462,194	17,525,244	846,936
Age 65 and Over			
A. Participants	19,091,892	16,889,085	1,061,332
B. Spouses	<u>20,653,005</u>	<u>11,651,363</u>	<u>714,831</u>
C. Total	39,744,897	28,540,448	1,776,163
Actives Total			
A. Participants	38,550,265	28,389,251	1,629,477
B. Spouses	<u>30,656,826</u>	<u>17,676,441</u>	<u>993,622</u>
C. Total	69,207,091	46,065,692	2,623,099
Retirees/Disabled			
Under Age 65			
A. Participants	1,294,070	1,294,070	0
B. Spouses	<u>821,328</u>	<u>821,328</u>	<u>0</u>
C. Total	2,115,398	2,115,398	0
Age 65 and Over			
A. Participants	18,248,336	18,248,336	0
B. Spouses	<u>5,295,990</u>	<u>5,295,990</u>	<u>0</u>
C. Total	23,544,326	23,544,326	0
Retirees/Disabled Total			
A. Participants	19,542,406	19,542,406	0
B. Spouses	<u>6,117,318</u>	<u>6,117,318</u>	<u>0</u>
C. Total	25,659,724	25,659,724	0
Total Population			
A. Participants	58,092,671	47,931,657	1,629,477
B. Spouses	<u>36,774,144</u>	<u>23,793,759</u>	<u>993,622</u>
C. Total	94,866,815	71,725,416	2,623,099

OVERVIEW OF GASB 74 AND 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 post-employment 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 post-employment benefits.

OVERVIEW OF GASB 74 AND 75

(continued)

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 post-employment benefits and when will they start?

Medical inflation and claims cost assumptions: When an employee starts receiving post-employment 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.

OVERVIEW OF GASB 74 AND 75

(continued)

GASB 74/75 – How we got here:

GASB 74 and 75 were designed to recognize the Other Postemployment Benefits (“OPEB”) earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. “pay-as-you-go” accounting while increasing disclosures to better reflect the plan’s liabilities and future funding requirements. 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. Additionally, GASB 74 and 75 require increased disclosures comparable to those required under GASB 67 and 68 and interest rates used in the valuation are more closely tied to the plan’s underlying investment and funding policy.

GASB 74 and 75 Impact

The Town has adopted GASB 74 for the fiscal year ending June 30, 2017 and GASB 75 for the fiscal year ending June 30, 2018. The adoption of GASB 74/75 introduces a new actuarial cost method and discount rate as well as new disclosures and methodologies for reporting plan liabilities and OPEB expenses. Significant changes have been made to the recognition of OPEB expenses, making the comparison of Net OPEB Expense in the current valuation to the expenses reported under GASB 45 misleading. The liability reported on the Town’s balance sheet will increase dramatically as GASB 74/75 require the recognition of liabilities immediately rather than recognizing liabilities (Net OPEB Obligation) over a 30 year period as GASB 45 allowed. Please keep these changes in mind when considering any comparison to previously reported liabilities and expenses.

SECTION II

SUMMARY OF PLAN PROVISIONS

<u>Effective Date</u>	GASB 45 is adopted July 1, 2008 GASB 74 is adopted for the fiscal year ending June 30, 2017 GASB 75 is adopted for the fiscal year ending June 30, 2018
<u>Plan Year</u>	July 1 through June 30.
<u>Eligibility</u>	An employee hired before April 2, 2012 shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service or an employee shall be able to retire with 20 years of service regardless of age.
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Participant Contributions</u>	40% of premiums for the PPO & Medicare Integrated Plans and 35% for others as well as 50% of premiums for Life insurance. Participants pay 100% of premiums for Dental Insurance.
<u>Benefits Offered</u>	Comprehensive Medical and Dental Insurance offered through Fallon Healthcare as well as 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>Normal Retirement Date</u>	The normal retirement date is the first day of the month following a participant's 65th birthday.
<u>Early Retirement</u>	Early retirement is available for any participant who has attained benefit eligibility.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

A. ACTUARIAL COST METHOD

The actuarial cost method used to calculate the costs and liabilities of the plan is the Individual Entry Age Normal Actuarial Cost Method. Under this method, the annual normal 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 normal cost for each active member is a level percent of payroll. The actuarial accrued liability is the actuarial present value of the projected benefit times the ratio of past service to expected total service at retirement/termination.

Actuarial gains and losses are calculated each year and amortized into the OPEB expense. Gains and losses arising from plan design changes are recognized immediately. Gains and losses arising from differences between expected and actual investment returns are amortized over a five (5) year period. Gain and losses arising from differences between expected and actual plan experience and changes in actuarial assumptions are amortized over the remaining lifetime of all active and retired plan participants (6.81 years for the Town for the 2018 fiscal year).

All employees who are plan participants on the valuation date are included in the actuarial valuation.

B. ASSET VALUATION METHOD

The actuarial value of assets is equal to the Market Value of the Plan's assets as of the measurement date.

SECTION IIIACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS

We used the following assumptions in this year's actuarial valuation:

Pre-Retirement Mortality

It is assumed that pre-retirement mortality is represented by the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females

Post-Retirement Mortality

It is assumed that post-retirement mortality is represented by the RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females

Disabled Mortality

It is assumed that disabled mortality is represented by the RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females

Mortality Experience Study

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

Discount Rate

5.75% per annum (previously 6.00%)

Long Term Rate of Return

6.44% (based on investment policy)

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Municipal Bond Rate

3.13% as of July 1, 2017 (source: S&P Municipal Bond 20-Year High Grade Index - SAPIHG)

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						
<u>Age</u>	<u>0-4 Years of Service (Males)</u>	<u>0-4 Years of Service (Females)</u>	<u>5-9 Years of Service (Males)</u>	<u>5-9 Years of Service (Females)</u>	<u>10+ Years of Service (Males)</u>	<u>10+ Years of Service (Females)</u>
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		
<u>Service</u>	<u>Public Safety Male</u>	<u>Public Safety Female</u>
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%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS
(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Retirement Rates

It was assumed that the following percentage of eligible employees would retire each year:

<u>Age</u>	<u>Standard Male</u>	<u>Standard Female</u>	<u>Male Teachers</u>	<u>Female Teachers</u>	<u>Public Safety</u>
45	0.00%	0.00%	0.00%	0.00%	1.00%
46	0.00%	0.00%	0.00%	0.00%	1.00%
47	0.00%	0.00%	0.00%	0.00%	1.00%
48	0.00%	0.00%	0.00%	0.00%	1.00%
49	0.00%	0.00%	0.00%	0.00%	1.00%
50	1.00%	1.50%	2.00%	1.50%	2.00%
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%

In the absence of census data specifying which employees are teachers it was assumed that two thirds of school employees are teachers. If available, actual census data was used.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

Disability rates

It was assumed that the following percentage of eligible employees would become permanently disabled each year:

<u>Age</u>	<u>Standard</u>	<u>Teachers</u>	<u>Public Safety</u>
20	0.01%	0.05%	0.20%
25	0.01%	0.06%	0.20%
30	0.01%	0.07%	0.21%
35	0.03%	0.10%	0.40%
40	0.07%	0.21%	0.71%
45	0.10%	0.30%	1.00%
50	0.13%	0.42%	1.10%
55	0.14%	0.50%	0.80%
60	0.12%	0.50%	0.80%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS
(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Healthcare Trend

It was assumed that healthcare costs would increase in accordance with the trend rates in the following table:

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2013	6.0%	5.5%
FY 2014	5.0%	5.0%
FY 2015	5.0%	5.0%
FY 2016	5.0%	5.0%
FY 2017	5.0%	5.0%
FY 2018	5.0%	5.0%
FY 2019	5.0%	5.0%
FY 2020+	5.0%	5.0%

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.

Percent Married

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. If provided, the actual census information was used. Otherwise it was assumed that a male spouse is three years older than a female spouse and same sex spouses are assumed to be the same age.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS
(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Compensation Increases

3.00% per year.

Open Group Forecast

It was assumed for projecting plan liabilities in future years that the active population would remain unchanged and that those who terminate employment or retire will be replaced with new employees with the demographics below:

Open Group Forecast Population Demographics

<u>Age</u>	<u>Male</u>	<u>Female</u>
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 values in this report reflect a closed group and do not reflect any new entrants after the valuation date.

For purposes of this valuation, retiree contributions were assumed to increase with the same trend rate as health care claims.

Medicare Part B Penalties are not reflected

Medicare Part B Reimbursement is not reflected

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

As part of the Other Post-Employment Benefits Program, there are situations where the cost is borne partly or entirely on the retirees. In most cases, the premium that is used to split the cost is lower than the true cost of providing the medical benefits, for two reasons:

- ✓ The cost sharing program is usually a fixed amount such as a COBRA premium that does not take into account the age of the retiree and his/her dependents. Since medical costs generally increase with age, the cost sharing premium is often lower than the true cost of the medical benefits:
- ✓ The cost sharing premium is usually a blended rate that takes into account the cost of medical benefits for active employees as well as retirees. Medical costs are generally higher for retirees than for active employees of the same age. This means that, again, the cost sharing premium is often lower than the true cost of the medical benefits.

Because of these two factors, a retiree who is paying 100% of the cost sharing premium is most likely not paying 100% of the true cost of the medical benefits. This situation is known as an "implicit subsidy". GASB 74 and 75 require the plan sponsor to measure the liability for this subsidy; that is, the difference between the true cost of the medical benefits and the cost sharing premiums paid by the retiree. 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. To do this, our valuation consists of several steps:

First, we calculate the liability for the true cost of medical benefits expected to be received by retirees and their dependents. This liability is based on factors developed by actuaries that reflect how the cost of medical benefits varies by age and gender, as well as the other assumptions discussed on the prior page.

Next, we calculate the liability for the future premiums expected to be paid by the retiree for their own and their dependents' coverage. This liability is based on the current premium rates without adjustment for age or gender. It also is based on the terms of the retiree medical program - different retirees pay different percentages based on their union, date of retirement, age at retirement, and other factors.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - Based on Active & Retiree Incurred Claims & Premiums

	Number of Participants			
	Single	Two-Person	Family	Total
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) - FY 2018		
	Single	Two-Person	Family
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	

Gross Expected FY 2018 Incurred Premiums	14,525,783
Adjustment to reflect children's claims	<u>(2,594,824)</u>
Total Expected FY 2018 Incurred Premiums (adults only)	11,930,959

II. PRE-65 AND POST-65 PER CAPITA RETIREE ANNUAL CLAIM COSTS

	Employer Primary	Medicare Primary
Age 65	14,096	3,964
Average Age	9,513	4,379

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS
(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

III. BREAKDOWN OF CLAIM COSTS

ALL ACTIVE EMPLOYEES AND SPOUSES

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
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

**ALL RETIREES AND SPOUSES - NOT
MEDICARE ELIGIBLE**

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
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

**ALL RETIREES AND SPOUSES - MEDICARE
ELIGIBLE**

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
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

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

E. DEVELOPMENT OF REPRESENTATIVE DENTAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - with Active & Retiree Incurred Premiums

	Per Contract Costs (monthly) - FY 2018		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
MetLife Dental - High Option	54.87	110.78	157.90
MetLife Dental - Low Option	30.50	57.81	106.75

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE

(As of the July 1, 2017 Measurement Date)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions require the following disclosures in the financial statements related to the retiree medical, dental and life insurance benefits;

1. A DESCRIPTION OF THE RETIREE MEDICAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Medical Insurance offered through Fallon Healthcare.
- b. Administrator: Town of Westford
- c. Eligibility: An employee hired before April 2, 2012 shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service or an employee shall be able to retire with 20 years of service regardless of age.
- d. Cost Sharing: Retirees pay 40% of premiums for the PPO & Medicare Integrated plans and 35% for all others.

2. A DESCRIPTION OF THE RETIREE DENTAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Dental
- b. Administrator: Town of Westford
- c. Eligibility: Same as above
- d. Cost sharing: 100% Participant Paid

3. A DESCRIPTION OF THE RETIREE LIFE INSURANCE PROGRAM:

- a. Plan Type: Group Term Life Insurance - \$1,000
- b. Administrator: Town of Westford
- c. Eligibility: Same as above
- d. Cost sharing: Retirees pay 50% of premiums.

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

4. RETIREE MEDICAL AND LIFE INSURANCE 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

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 July 1, 2017 Measurement Date total Town premiums plus implicit costs for the retiree medical program were \$2,042,259. The Town also made a contribution to an OPEB Trust of \$1,120,254 for a total contribution during the measurement period of \$3,162,513 to be reported on the financial statement for the fiscal year ending June 30, 2018.

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

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	30.75%	Domestic Equity - Large Cap	4.00%
Domestic Equity - Small/Mid Cap	16.25%	Domestic Equity - Small/Mid Cap	6.00%
International Equity - Developed Market	6.50%	International Equity - Developed Market	4.50%
International Equity-Emerging Market	3.25%	International Equity-Emerging Market	7.00%
Domestic Fixed Income	20.00%	Domestic Fixed Income	2.00%
International Fixed Income	10.00%	International Fixed Income	3.00%
Alternatives	0.00%	Alternatives	6.50%
Real Estate	8.25%	Real Estate	6.25%
Cash	5.00%	Cash	0.00%
Total	<u>100.00%</u>		
		I. Real Rate of Return	<u>3.94%</u>
		II. Inflation Assumption	2.75%
		III. Total Nominal Return [I. + II.]	6.69%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	6.44%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

7. ACTUARIALLY DETERMINED CONTRIBUTION (ADC)

The Town's Actuarially Determined Contribution (ADC) is an amount actuarially determined in accordance with the parameters of GASB Statement No. 74/75 which represents a level of funding that, if paid on an ongoing basis, is projected to cover the service cost each year and amortize any unfunded actuarial liabilities (or funding excess). The following table shows the components of the Town's annual ADC for the fiscal year and the amount actually contributed to the plan:

Actuarially Determined Contribution - Deficiency / (Excess)	
<u>For the Period Ending on the July 1, 2017 to be Reported on June 30, 2018</u>	
I. Service Cost	2,623,099
II. 30 year level flat dollar amortization of NOL at 5.75%	<u>4,558,365</u>
III. Actuarial Determined Contribution [I. + II.]	7,181,464
IV. Contributions in relation to the actuarially determined contribution	<u>(3,162,513)</u>
V. Contribution deficiency / (excess) [III. + IV.]	<u>4,018,951</u>
Covered employee payroll	57,273,016
Contributions as a % of covered employee payroll	5.52%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

8. FUNDED STATUS AND FUNDING PROGRESS

As of the July 1, 2017 Measurement Date, the plan was 4.96% funded. The Total OPEB Liability (TOL) for benefits was \$71,725,416, and the Fiduciary Net Position was \$3,559,027, resulting in a Net OPEB Liability (NOL) of \$68,166,389. The covered payroll (annual payroll of active employees covered by the plan) was \$ 57,273,016 and the ratio of the NOL to the covered payroll was 119.0%.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the actuarially determined contribution of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented in the required supplementary information following the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the Total OPEB Liabilities for benefits.

Fiscal Year	Measurement Date	Fiduciary Net Position	Total OPEB Liability	Net OPEB Liability	Funded Ratio	Covered Payroll	NOL as a % of Covered Payroll
2020	07/01/2019 (est.)	\$6,254,053	\$81,257,413	\$75,003,360	7.7%	\$60,760,943	123.4%
2019	07/01/2018 (est.)	\$4,554,552	\$76,391,404	\$71,836,852	6.0%	\$58,991,206	121.8%
2018	07/01/2017	\$3,559,027	\$71,725,416	\$68,166,389	5.0%	\$57,273,016	119.0%
2017	07/01/2016	\$2,286,510	\$65,961,973	\$63,675,463	3.5%	\$57,373,661	111.0%
2016	07/01/2015	\$1,480,133	\$59,530,723	\$58,050,590	2.5%	\$55,800,298	104.0%
2015	07/01/2014	\$223,205	\$55,878,110	\$55,654,905	0.4%	\$54,175,047	102.7%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

9. FIDUCIARY NET POSITION

Statement of Fiduciary Net Position		
July 1, 2017 and July 1, 2018		
	<u>July 1, 2018</u>	<u>July 1, 2017</u>
Assets		
I. Cash and cash equivalents	0	0
<u>Receivables & Prepaid expenses:</u>		
II. Contributions	0	0
III. Investment Income	0	0
IV. Receivables from brokers for unsettled trades	0	0
V. Prepaid expenses	<u>0</u>	<u>0</u>
VI. Total Receivables [II.+III.+IV.+V.]	<u>0</u>	<u>0</u>
<u>OPEB Trust Investments:</u>		
VII. Fixed Income	1,366,365	1,067,707
VIII. Stocks	2,584,708	2,019,748
IX. Cash and cash equivalents	227,728	177,952
X. Real estate	375,751	293,620
XI. Alternative investments	<u>0</u>	<u>0</u>
XII. Total Investments [VII.+VIII.+IX.+X.+XI.]	<u>4,554,552</u>	<u>3,559,027</u>
Invested securities lending cash collateral	0	0
Capital assets, net of accumulated depreciation	0	0
Total Assets	4,554,552	3,559,027
Liabilities		
XIII. Accrued expenses and benefits payable	0	0
XIV. Securities lending cash collateral	0	0
XV. Payable to brokers for unsettled trades	<u>0</u>	<u>0</u>
XVI. Total liabilities [XIII.+XIV.+XV.]	<u>0</u>	<u>0</u>
XVII. Net Position restricted for OPEB [XII.-XVI.]	4,554,552	3,559,027

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

9. **FIDUCIARY NET POSITION (CONTINUED)**

Statement of Changes in Fiduciary Net Position	
<u>For the Year Ending on the July 1, 2017 Measurement Date</u>	
Additions	
<u>Contributions</u>	
Employer Contributions to OPEB Trust	<u>1,120,254</u>
Total Contributions	1,120,254
<u>Investment Income / (loss)</u>	
Interest	59,169
Dividends	40,395
Equity fund income, net	0
Net increase in fair value of investments	52,699
Securities lending income	0
Less investment expenses:	
Direct investment expense	0
Securities lending management fees	0
Securities lending borrower rebates	<u>0</u>
Net investment income	152,263
Other income	<u>0</u>
Total Additions	<u>1,272,517</u>
Deductions	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	<u>0</u>
Total deductions	<u>0</u>
Net increase (decrease)	1,272,517
Net Position restricted for OPEB	
As of July 1, 2016	<u>2,286,510</u>
As of July 1, 2017	3,559,027

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

10. OPEB LIABILITY, OPEB EXPENSE AND ADC

Fiscal Year Ending June 30, 2018								
	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	9,901,488	53,843,851	3,345,583	2,909,601	1,029,655	232,381	462,857	71,725,416
II. Fiduciary Net Position as of July 1, 2018	425,242	2,073,921	128,006	112,453	819,405	-	-	3,559,027
III. Net OPEB Liability (Asset) [I. - II.]	9,476,246	51,769,930	3,217,577	2,797,148	210,250	232,381	462,857	68,166,389
IV. Service Cost	204,506	2,050,343	185,919	93,409	31,047	16,150	41,725	2,623,099
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	548,701	3,052,599	195,860	166,274	58,055	13,799	27,917	4,063,205
VI. Projected Earnings on OPEB Plan Investments	(22,200)	(110,436)	(6,874)	(6,005)	(37,246)	-	-	(182,761)
VII. Net Recognition of Deferred (Inflows)/Outflows	(39,140)	(213,256)	(13,253)	(11,523)	(2,742)	(936)	(1,864)	(282,714)
VIII. Financial Statement Expense [IV. + V. + VI. + VII. + VIII. + VI. + VII.]	691,867	4,779,250	361,652	242,155	49,114	29,013	67,778	6,220,829
IX. Employer Share of Costs	(389,665)	(1,607,983)	(4,919)	(10,046)	(25,916)	(3)	(3,727)	(2,042,259)
X. Employer (Payments) Withdrawals to/from OPEB Trust	(152,195)	(851,348)	(55,437)	(47,014)	(14,260)	-	-	(1,120,254)
XI. Total Employer Contribution [IX. + X.]	(541,860)	(2,459,331)	(60,356)	(57,060)	(40,176)	(3)	(3,727)	(3,162,513)
XII. Net OPEB Expense [VIII. + XI.]	150,007	2,319,919	301,296	185,095	8,938	29,010	64,051	3,058,316
XIII. Actuarial Determined Contribution (ADC)	838,193	5,512,258	401,082	280,457	45,107	31,690	72,677	7,181,464
XIV. Total Expected Contribution	541,860	2,459,331	60,356	57,060	40,176	3	3,727	3,162,513
XV. Percentage of ADC Contributed [XIV. / XIII.]	65%	45%	15%	20%	89%	0%	5%	44%

Fiscal Year Ending June 30, 2019								
	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	10,252,505	57,350,174	3,734,460	3,167,066	1,093,301	263,292	530,606	76,391,404
II. Fiduciary Net Position as of July 1, 2018	561,093	2,836,980	177,766	154,613	824,100	-	-	4,554,552
III. Net OPEB Liability (Asset) [I. - II.]	9,691,412	54,513,194	3,556,694	3,012,453	269,201	263,292	530,606	71,836,852
IV. Service Cost	210,184	2,107,265	191,081	96,002	31,909	16,598	42,883	2,695,922
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	569,277	3,167,069	203,205	172,509	60,232	14,316	28,964	4,215,572
VI. Projected Earnings on OPEB plan investments	(31,694)	(157,661)	(9,813)	(8,573)	(53,173)	-	-	(260,914)
VII. Net Recognition of Deferred (Inflows)/Outflows	(31,480)	(172,311)	(10,574)	(9,259)	(3,298)	(753)	(1,864)	(229,539)
VIII. Financial Statement Expense [IV. + V. + VI. + VII.]	716,287	4,944,362	373,899	250,679	35,670	30,161	69,983	6,421,041
IX. Employer Share of Costs	(428,444)	(1,768,011)	(5,409)	(11,046)	(28,495)	(3)	(4,098)	(2,245,506)
X. Employer (Payments) Withdrawals to/from OPEB Trust	(135,924)	(760,328)	(49,510)	(41,988)	(12,735)	-	-	(1,000,485)
XI. Total Employer Contribution [IX. + X.]	(564,368)	(2,528,339)	(54,919)	(53,034)	(41,230)	(3)	(4,098)	(3,245,991)
XII. Net OPEB Expense [VIII. + XI.]	151,919	2,416,023	318,980	197,645	(5,560)	30,158	65,885	3,175,050
XIII. Actuarial Determined Contribution (ADC)	858,260	5,752,625	428,921	297,448	49,911	34,205	78,365	7,499,735
XIV. Total Expected Contribution	564,368	2,528,339	54,919	53,034	41,230	3	4,098	3,245,991
XV. Percentage of ADC Contributed [XIV. / XIII.]	66%	44%	13%	18%	83%	0%	5%	43%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

11. OPEB LIABILITY, OPEB EXPENSE AND DEFERRED INFLOW/OUTFLOW

Valuation Date	July 1, 2017	July 1, 2017
For the Measurement Period ending on the Measurement Date of:	July 1, 2017	July 1, 2018
For the Reporting Period & Fiscal Year ending on:	June 30, 2018	June 30, 2019

Source of Deferred Inflow/Outflow		
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	(1,678,007)	(1,389,193)
II. Deferred (Inflow)/Outflow from Investment Experience	24,398	230,997
III. Deferred (Inflow)/Outflow from Changes in Benefit Terms	0	0
IV. Deferred (Inflow)/Outflow from Changes in Assumptions	0	0

Change in Deferred Inflow/Outflow		
I. Deferred Outflow at the beginning of the period	0	24,398
II. Deferred Outflow created during the period	30,498	265,874
III. Deferred Outflow recognized during the period	6,100	59,275
IV. Change in Deferred Outflow (II. - III.)	24,398	(206,599)
V. Deferred Outflow at end of the period (I. + IV.)	24,398	230,997
VI. Deferred Inflow at the beginning of the period	0	(1,678,007)
VII. Deferred Inflow created during the period	(1,966,821)	0
VIII. Deferred Inflow recognized during the period	(288,814)	(288,814)
IX. Deferred Inflow at end of the period (VII. - VIII.)	(1,678,007)	288,814
X. Deferred Inflow at end of the period (VI. + IX.)	(1,678,007)	(1,389,193)

Net OPEB Liability		
I. Net OPEB Liability at beginning of period	66,761,682	68,166,389
II. Service Cost	2,623,099	2,695,922
III. Interest on Total OPEB Liability, Service Cost, and Payments	4,063,205	4,215,572
IV. Projected Investment Income	(182,761)	(260,914)
V. Total Employer Contributions	(3,162,513)	(3,245,991)
VI. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V.)	3,341,030	3,404,589
VII. Deferred Outflow created during the period	30,498	265,874
VIII. Deferred Inflow created during the period	(1,966,821)	0
IX. Net OPEB Liability at end of period (I. + VI. + VII. + VIII.)	68,166,389	71,836,852

Net OPEB Expense		
I. Service Cost	2,623,099	2,695,922
II. Interest on Total OPEB Liability, Service Cost, and Payments	4,063,205	4,215,572
III. Projected Investment Income	(182,761)	(260,914)
IV. Recognition of Deferred (Inflow)/Outflow	(282,714)	(229,539)
V. Financial Statement Expense (I. + II. + III. + IV.)	6,220,829	6,421,041
VI. Benefit Payments	(2,042,259)	(2,245,506)
VII. Contributions to Trust	(1,120,254)	(1,000,485)
VIII. Total Employer Payments (VI. + VII.)	(3,162,513)	(3,245,991)
IX. Total Employer Payments (V. + VIII.)	3,058,316	3,175,050

Valuation Date	July 1, 2017	July 1, 2017
For the Measurement Period ending on the Measurement Date of:	July 1, 2017	July 1, 2018
For the Reporting Period & Fiscal Year ending on:	June 30, 2018	June 30, 2019

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

12. EFFECT OF 1% CHANGE IN HEALTHCARE TREND

Impact of a 1% Change in the Healthcare Trend Rate as of the July 1, 2017 Measurement Date

	<u>1% Decrease (4.00%)</u>	<u>Current Trend Rate (5.00%)</u>	<u>1% Increase (6.00%)</u>
I. Total OPEB Liability	55,033,521	71,725,416	92,941,751
II. Fiduciary Net Position	<u>3,559,027</u>	<u>3,559,027</u>	<u>3,559,027</u>
III. Net OPEB Liability (Asset) [I.-II.]	51,474,494	68,166,389	89,382,724
IV. Service Cost	1,742,331	2,623,099	3,806,360

Impact of a 1% Change in the Healthcare Trend Rate as of the July 1, 2018 Measurement Date

	<u>1% Decrease (4.00%)</u>	<u>Current Trend Rate (5.00%)</u>	<u>1% Increase (6.00%)</u>
I. Total OPEB Liability	58,613,062	76,391,404	98,988,673
II. Fiduciary Net Position	<u>4,554,552</u>	<u>4,554,552</u>	<u>4,554,552</u>
III. Net OPEB Liability (Asset) [I.-II.]	54,058,510	71,836,852	94,434,121
IV. Service Cost	1,790,714	2,695,924	3,912,022

13. EFFECT OF 1% CHANGE IN DISCOUNT RATES

Impact of a 1% Change in the Discount Rate as of the July 1, 2017 Measurement Date

	<u>1% Decrease (4.75%)</u>	<u>Current Discount Rate (5.75%)</u>	<u>1% Increase (6.75%)</u>
I. Total OPEB Liability	83,166,296	71,725,416	62,570,434
II. Fiduciary Net Position	<u>3,559,027</u>	<u>3,559,027</u>	<u>3,559,027</u>
III. Net OPEB Liability (Asset) [I.-II.]	79,607,269	68,166,389	59,011,407
IV. Service Cost	3,349,817	2,623,099	2,079,207

Impact of a 1% Change in the Discount Rate as of the July 1, 2018 Measurement Date

	<u>1% Decrease (4.75%)</u>	<u>Current Discount Rate (5.75%)</u>	<u>1% Increase (6.75%)</u>
I. Total OPEB Liability	88,576,553	76,391,404	66,640,859
II. Fiduciary Net Position	<u>4,554,552</u>	<u>4,554,552</u>	<u>4,554,552</u>
III. Net OPEB Liability (Asset) [I.-II.]	84,022,001	71,836,852	62,086,307
IV. Service Cost	3,442,818	2,695,924	2,136,932

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE

(As of the July 1, 2017 Measurement Date)

(continued)

14. ACTUARIAL METHODS AND ASSUMPTIONS

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Actuarial Cost Method: Individual Entry Age Normal
Discount Rate: 5.75% per annum (previously 6.00%)
Healthcare Trend Rates

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2013	6.0%	5.5%
FY 2014	5.0%	5.0%
FY 2015	5.0%	5.0%
FY 2016	5.0%	5.0%
FY 2017	5.0%	5.0%
FY 2018	5.0%	5.0%
FY 2019	5.0%	5.0%
FY 2020+	5.0%	5.0%

General Inflation Assumption: 2.75% per annum
Annual Compensation Increases: 3.00% per annum
Actuarial Value of Assets: Market Value

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE

(As of the July 1, 2017 Measurement Date)

(continued)

15. RECOGNITION OF OPEB TRUST ASSETS

The State of Massachusetts has passed legislation allowing municipal entities to establish a Trust for Other Postemployment Benefits (“OPEB”) under M.G.L. Chapter 32B, Section 20 for purposes of accumulating assets to pre-fund the liabilities under GASB 75. This legislation was amended effective November 9, 2016 to clarify who may adopt such a Trust and provide guidance on the ongoing operation of such a Trust. To the best of our knowledge, the Town of Westford has established an irrevocable trust for the purposes of prefunding liabilities under GASB 74/75.

16. OPEB EXPENSE DEVELOPMENT

Components of the Town's OPEB Expenses for the Fiscal Year Ending June 30, 2018	
Description	Amount
I. Service Cost	2,623,099
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	4,063,205
III. Deferred (Inflows)/Outflows from Plan Design Changes*	0
IV. Deferred (Inflows)/Outflows from Plan Experience**	(288,814)
V. Deferred (Inflows)/Outflows from Changes of Assumptions**	0
VI. Projected earnings on OPEB plan investments	(182,761)
VII. Deferred (Inflows)/Outflows from Earnings on Plan Investments***	6,100
VIII. Total Employer Contributions	(3,162,513)
IX. OPEB Plan administrative expense	0
X. Other changes in fiduciary net position	0
XI. Net OPEB expense [I.+II.+III.+IV.+V.+VI.+VII.+VIII.+IX.+ X.]	3,058,316

* Recognized Immediately

** Amortized over 6.81 years

*** Amortized over 5 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

17. CHANGES IN NET OPEB LIABILITY

	Changes in Net OPEB Liability		
	Total OPEB Liability	Increase (Decrease)	
		Plan Fiduciary Net Position	Net OPEB Liability
I. Balances at July 1, 2016 GASB 45	65,961,973	2,286,510	63,675,463
II. Change in Assumptions for GASB 75	<u>3,086,219</u>	<u>0</u>	<u>3,086,219</u>
III. Balances at July 1, 2016 GASB 75 [I. + II.]	69,048,192	2,286,510	66,761,682
Changes for the year:			
IV. Service Cost	2,623,099	0	2,623,099
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	4,063,205	0	4,063,205
VI. Changes in Benefit terms *	0	0	0
VII. Change in assumptions **	0	0	0
VIII. Differences between actual and expected experience **	(1,966,821)	0	(1,966,821)
IX. Net Investment Income	0	152,263	(152,263)
X. Employer Contributions to Trust	0	3,162,513	(3,162,513)
XI. Benefit Payments Withdrawn from Trust	0	(2,042,259)	2,042,259
XII. Benefit payments excluding Implicit Cost	N/A	0	N/A
XIII. Implicit Cost amount	N/A	0	N/A
XIV. Total Benefit payments including Implicit Cost [XII. + XIII.]	(2,042,259)	0	(2,042,259)
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>2,677,224</u>	<u>1,272,517</u>	<u>1,404,707</u>
XVII. Balances at July 1, 2017 [III.+XVII.]	71,725,416	3,559,027	68,166,389

* Recognized Immediately

** Amortized over 6.81 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

18. MONEY WEIGHTED RATE OF RETURN

Determination of Beginning & Ending Balances of OPEB Plan Investments for Purposes of Calculating the Annual Money-Weighted Rate of Return		
	Assets as of July 1, 2016	Assets as of July 1, 2017
Assets		
Cash and cash equivalents	0	0
Receivables:		
Investment income	0	0
Receivables from brokers for unsettled trades	0	0
Investments		
Fixed income	685,952	1,067,707
Stocks	1,297,595	2,019,748
Cash and cash equivalents	114,326	177,952
Real estate	188,637	293,620
Alternative investments	0	0
Invested securities lending cash collateral	0	0
Liabilities		
Securities lending cash collateral	0	0
Payable to brokers for unsettled trades	0	0
Total OPEB plan investments	2,286,510	3,559,027

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

18. MONEY WEIGHTED RATE OF RETURN (CONTINUED)

	Plan Investments / Net External	Periods Invested	Period Weight
I. Beginning value - July 1, 2016	2,286,510	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	0	10	0.8333
September	862,307	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	0	3	0.2500
April	257,947	2	0.1667
May	0	1	0.0833
<u>June</u>	<u>0</u>	0	0.0000
II. Total net external cash flow	1,120,254		
III. Earnings and increase in fair value	152,263		
IV. Ending value - June 30, 2017 [I.+II.+III.]	3,559,027		
Money Weighted Rate of Return	5.12%		
Asset Value - June 30, 2017	3,559,027		

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

19. PLAN CASH FLOWS

Aggregate External (Noninvestment Cash Flows)	
<u>For the Year Ending on the July 1, 2017 Measurement Date</u>	
Additions	
<u>Contributions</u>	
Member contributions	0
Employer contributions	1,120,254
Other income	0
Deductions	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	0
Beginning balances of noninvestment-related assets and liabilities	
Contribution receivable	0
Prepaid expenses	0
Accrued expenses & benefits payable	0
Ending balances of noninvestment-related assets and liabilities	
Contribution receivable	0
Prepaid expenses	0
Accrued expenses & benefits payable	0
Change in capital assets - depreciation	0
Aggregate external cash flows	1,120,254

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

19. PLAN CASH FLOWS (CONTINUED)

Reconciliation of Beginning & Ending Balances of OPEB Plan Investments, Aggregate External Cash Flows, and Net Investment Income	
<u>For the Year Ending on the July 1, 2017 Measurement Date</u>	
I. Total OPEB plan investments on July 1, 2016	2,286,510
II. Aggregate external cash flows	1,120,254
III. Net investment income	<u>152,263</u>
IV. Total OPEB plan investments on July 1, 2017 [I.+II.+III.]	<u><u>3,559,027</u></u>

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES

Projection of Contributions using a July 1, 2017 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total employee 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.]
July 1, 2017	57,273,016	0	57,273,016	0	2,042,259	0	2,042,259
July 1, 2018	53,650,959	5,340,247	58,991,206	0	2,245,508	0	2,245,508
July 1, 2019	50,794,782	9,966,160	60,760,942	0	2,485,694	0	2,485,694
July 1, 2020	48,281,763	14,302,007	62,583,770	0	2,709,299	0	2,709,299
July 1, 2021	45,953,821	18,507,462	64,461,283	0	2,893,050	0	2,893,050
July 1, 2022	43,801,402	22,593,719	66,395,121	0	3,097,605	0	3,097,605
July 1, 2023	41,837,599	26,549,376	68,386,975	0	3,348,075	0	3,348,075
July 1, 2024	39,994,731	30,443,853	70,438,584	0	3,555,130	0	3,555,130
July 1, 2025	38,361,155	34,190,587	72,551,742	0	3,809,172	0	3,809,172
July 1, 2026	36,486,270	38,242,024	74,728,294	0	4,115,244	0	4,115,244
July 1, 2027	34,770,312	42,199,831	76,970,143	0	4,428,212	0	4,428,212
July 1, 2028	32,852,763	46,426,484	79,279,247	0	4,772,119	0	4,772,119
July 1, 2029	30,909,891	50,747,733	81,657,624	0	5,216,311	39,820	5,256,131
July 1, 2030	29,043,751	55,063,602	84,107,353	0	5,623,532	104,507	5,728,039
July 1, 2031	27,161,827	59,468,747	86,630,574	0	5,999,101	198,295	6,197,396
July 1, 2032	25,402,234	63,827,257	89,229,491	0	6,430,438	323,711	6,754,149
July 1, 2033	23,734,673	68,171,703	91,906,376	0	6,857,557	478,451	7,336,008
July 1, 2034	21,974,763	72,688,804	94,663,567	0	7,065,658	602,440	7,668,098
July 1, 2035	20,327,426	77,176,048	97,503,474	0	7,322,447	748,966	8,071,413
July 1, 2036	18,764,342	81,664,236	100,428,578	0	7,506,034	913,493	8,419,527
July 1, 2037	17,262,336	86,179,099	103,441,435	0	7,647,551	1,053,838	8,701,389
July 1, 2038	15,687,277	90,857,401	106,544,678	0	7,808,778	1,212,438	9,021,216
July 1, 2039	14,272,334	95,468,684	109,741,018	0	8,075,007	1,426,838	9,501,845
July 1, 2040	12,869,009	100,164,240	113,033,249	0	8,170,912	1,716,537	9,887,449
July 1, 2041	11,579,818	104,844,428	116,424,246	0	8,327,589	2,081,576	10,409,165
July 1, 2042	10,337,090	109,579,883	119,916,973	0	8,521,230	2,526,753	11,047,983
July 1, 2043	9,245,550	114,268,932	123,514,482	0	8,589,203	3,044,155	11,633,358
July 1, 2044	8,112,878	119,107,038	127,219,916	0	8,587,160	3,484,458	12,071,618
July 1, 2045	7,139,542	123,896,971	131,036,513	0	8,540,160	3,981,755	12,521,915
July 1, 2046	6,309,451	128,658,157	134,967,608	0	8,544,305	4,523,617	13,067,922
July 1, 2047	5,394,287	133,622,349	139,016,636	0	8,365,361	5,026,823	13,392,184
July 1, 2048	4,595,456	138,591,679	143,187,135	0	8,320,215	5,575,079	13,895,294
July 1, 2049	3,823,870	143,658,879	147,482,749	0	8,222,419	6,187,762	14,410,181
July 1, 2050	3,190,887	148,716,344	151,907,231	0	8,067,128	6,871,189	14,938,317
July 1, 2051	2,592,229	153,872,219	156,464,448	0	7,961,353	7,623,111	15,584,464
July 1, 2052	2,135,266	159,023,115	161,158,381	0	7,863,872	8,451,860	16,315,732
July 1, 2053	1,701,461	164,291,671	165,993,132	0	7,776,606	9,357,561	17,134,167
July 1, 2054	1,326,998	169,645,928	170,972,926	0	7,724,901	10,272,364	17,997,265
July 1, 2055	982,218	175,119,896	176,102,114	0	7,628,363	11,251,876	18,880,239
July 1, 2056	739,416	180,645,761	181,385,177	0	7,467,211	12,290,044	19,757,255

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FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

Projection of Contributions using a July 1, 2017 Valuation Date (Continued)

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total employee 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.]
July 1, 2057	542,827	186,283,905	186,826,732	0	7,335,692	13,370,735	20,706,427
July 1, 2058	394,505	192,037,029	192,431,534	0	7,193,835	14,511,745	21,705,580
July 1, 2059	263,733	197,940,747	198,204,480	0	7,002,133	15,725,994	22,728,127
July 1, 2060	172,792	203,977,822	204,150,614	0	6,854,492	17,022,999	23,877,491
July 1, 2061	95,900	210,179,232	210,275,132	0	6,690,623	18,404,193	25,094,816
July 1, 2062	43,936	216,539,450	216,583,386	0	6,486,076	19,876,684	26,362,760
July 1, 2063	15,401	223,065,487	223,080,888	0	6,309,396	21,443,381	27,752,777
July 1, 2064	4,212	229,769,103	229,773,315	0	6,118,301	23,070,579	29,188,880
July 1, 2065	3,098	236,663,416	236,666,514	0	5,897,990	24,784,126	30,682,116
July 1, 2066	893	243,765,616	243,766,509	0	5,676,098	26,589,387	32,265,485
July 1, 2067	0	251,079,504	251,079,504	0	5,445,296	28,469,590	33,914,886
July 1, 2068	0	258,611,889	258,611,889	0	5,206,175	30,436,647	35,642,822
July 1, 2069	0	266,370,246	266,370,246	0	4,959,563	32,499,976	37,459,539
July 1, 2070	0	274,361,353	274,361,353	0	4,707,832	34,663,776	39,371,608
July 1, 2071	0	282,592,194	282,592,194	0	4,451,724	36,931,869	41,383,593
July 1, 2072	0	291,069,960	291,069,960	0	4,194,353	39,311,215	43,505,568
July 1, 2073	0	299,802,059	299,802,059	0	3,975,459	41,808,773	45,784,232
July 1, 2074	0	308,796,121	308,796,121	0	3,762,486	44,426,184	48,188,670
July 1, 2075	0	318,060,005	318,060,005	0	3,542,118	47,163,163	50,705,281
July 1, 2076	0	327,601,805	327,601,805	0	3,316,546	50,030,281	53,346,827
July 1, 2077	0	337,429,859	337,429,859	0	3,086,900	53,030,567	56,117,467
July 1, 2078	0	347,552,755	347,552,755	0	2,855,914	56,165,019	59,020,933
July 1, 2079	0	357,979,338	357,979,338	0	2,625,498	59,444,022	62,069,520
July 1, 2080	0	368,718,718	368,718,718	0	2,397,929	62,879,248	65,277,177
July 1, 2081	0	379,780,280	379,780,280	0	2,176,034	66,475,326	68,651,360
July 1, 2082	0	391,173,688	391,173,688	0	1,960,097	70,246,154	72,206,251
July 1, 2083	0	402,908,899	402,908,899	0	1,753,128	74,203,076	75,956,204
July 1, 2084	0	414,996,166	414,996,166	0	1,555,469	78,353,437	79,908,906
July 1, 2085	0	427,446,051	427,446,051	0	1,369,346	82,704,034	84,073,380
July 1, 2086	0	440,269,433	440,269,433	0	1,195,164	87,269,573	88,464,737
July 1, 2087	0	453,477,516	453,477,516	0	1,034,307	92,061,156	93,095,463
July 1, 2088	0	467,081,841	467,081,841	0	886,425	97,084,899	97,971,324
July 1, 2089	0	481,094,296	481,094,296	0	752,176	102,358,766	103,110,942
July 1, 2090	0	495,527,125	495,527,125	0	631,733	107,894,760	108,526,493
July 1, 2091	0	510,392,939	510,392,939	0	524,711	113,708,503	114,233,214
July 1, 2092	0	525,704,727	525,704,727	0	431,026	119,814,847	120,245,873
July 1, 2093	0	541,475,869	541,475,869	0	350,302	126,231,295	126,581,597
July 1, 2094	0	557,720,145	557,720,145	0	281,357	132,972,950	133,254,307
July 1, 2095	0	574,451,749	574,451,749	0	223,385	140,055,684	140,279,069

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

20. PLAN 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
July 1, 2017	2,286,510	2,042,259	2,042,259	0	1,120,254	1,120,254	152,263	3,559,027
July 1, 2018	3,559,027	2,245,508	2,245,508	0	1,000,485	909,915	(4,960)	4,463,982
July 1, 2019	4,463,982	2,485,694	2,485,694	0	1,362,984	1,139,424	330,684	5,934,090
July 1, 2020	5,934,090	2,709,299	2,709,299	0	1,660,743	1,281,220	434,797	7,650,107
July 1, 2021	7,650,107	2,893,050	2,893,050	0	1,997,421	1,423,942	555,980	9,630,029
July 1, 2022	9,630,029	3,097,605	3,097,605	0	2,377,339	1,568,350	695,530	11,893,909
July 1, 2023	11,893,909	3,348,075	3,348,075	0	2,496,206	1,527,122	845,092	14,266,123
July 1, 2024	14,266,123	3,555,130	3,555,130	0	2,621,016	1,488,202	1,001,818	16,756,143
July 1, 2025	16,756,143	3,809,172	3,809,172	0	2,752,067	1,455,133	1,166,330	19,377,606
July 1, 2026	19,377,606	4,115,244	4,115,244	0	2,889,670	1,410,888	1,339,514	22,128,008
July 1, 2027	22,128,008	4,428,212	4,428,212	0	3,034,154	1,370,642	1,521,219	25,019,869
July 1, 2028	25,019,869	4,772,119	4,772,119	0	3,185,862	1,320,199	1,712,264	28,052,332
July 1, 2029	28,052,332	5,216,311	5,256,131	0	3,345,155	1,266,243	1,912,604	31,191,359
July 1, 2030	31,191,359	5,623,532	5,728,039	0	3,512,413	1,212,898	2,120,059	34,419,809
July 1, 2031	34,419,809	5,999,101	6,197,396	0	3,688,034	1,156,332	2,333,538	37,711,384
July 1, 2032	37,711,384	6,430,438	6,754,149	0	3,872,436	1,102,422	2,551,360	41,041,455
July 1, 2033	41,041,455	6,857,557	7,336,008	0	4,066,058	1,050,053	2,771,954	44,385,011
July 1, 2034	44,385,011	7,065,658	7,668,098	0	4,269,361	991,070	2,993,723	47,767,364
July 1, 2035	47,767,364	7,322,447	8,071,413	0	4,482,829	934,576	3,218,313	51,171,287
July 1, 2036	51,171,287	7,506,034	8,419,527	0	4,706,970	879,463	3,444,631	54,581,888
July 1, 2037	54,581,888	7,647,551	8,701,389	0	4,942,319	824,776	3,671,733	58,024,559
July 1, 2038	58,024,559	7,808,778	9,021,216	0	5,189,435	764,075	3,901,274	61,477,470
July 1, 2039	61,477,470	8,075,007	9,501,845	0	5,448,907	708,656	4,131,867	64,891,155
July 1, 2040	64,891,155	8,170,912	9,887,449	0	5,721,352	651,385	4,360,344	68,186,347
July 1, 2041	68,186,347	8,327,589	10,409,165	0	6,007,420	597,512	4,581,622	71,283,905
July 1, 2042	71,283,905	8,521,230	11,047,983	0	6,307,791	543,745	4,790,626	74,091,523
July 1, 2043	74,091,523	8,589,203	11,633,358	0	6,623,181	495,771	4,981,433	76,524,572
July 1, 2044	76,524,572	8,587,160	12,071,618	0	6,954,340	443,482	5,148,619	78,632,215
July 1, 2045	78,632,215	8,540,160	12,521,915	0	7,302,057	397,854	5,295,373	80,343,687
July 1, 2046	80,343,687	8,544,305	13,067,922	0	7,667,160	358,424	5,417,164	81,595,658
July 1, 2047	81,595,658	8,365,361	13,392,184	0	8,050,518	312,386	5,509,943	82,391,164
July 1, 2048	82,391,164	8,320,215	13,895,294	0	0	0	5,305,991	82,122,076
July 1, 2049	82,122,076	8,222,419	14,410,181	0	0	0	5,288,662	81,222,976
July 1, 2050	81,222,976	8,067,128	14,938,317	0	0	0	5,230,760	79,582,547
July 1, 2051	79,582,547	7,961,353	15,584,464	0	0	0	5,125,116	77,084,552
July 1, 2052	77,084,552	7,863,872	16,315,732	0	0	0	4,964,245	73,596,937
July 1, 2053	73,596,937	7,776,606	17,134,167	0	0	0	4,739,643	68,979,019
July 1, 2054	68,979,019	7,724,901	17,997,265	0	0	0	4,442,249	63,148,904
July 1, 2055	63,148,904	7,628,363	18,880,239	0	0	0	4,066,789	55,963,817
July 1, 2056	55,963,817	7,467,211	19,757,255	0	0	0	3,604,070	47,277,843

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2017 Valuation Date (Continued)								
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
	July 1, 2057	47,277,843	7,335,692	20,706,427	0	0	0	3,044,693
July 1, 2058	39,950,997	7,193,835	21,705,580	0	0	0	2,572,844	32,762,437
July 1, 2059	32,762,437	7,002,133	22,728,127	0	0	0	2,109,901	25,763,111
July 1, 2060	25,763,111	6,854,492	23,877,491	0	0	0	1,659,144	18,910,024
July 1, 2061	18,910,024	6,690,623	25,094,816	0	0	0	1,217,806	12,219,956
July 1, 2062	12,219,956	6,486,076	26,362,760	0	0	0	786,965	5,734,040
July 1, 2063	5,734,040	6,309,396	27,752,777	0	0	0	369,272	369,272
July 1, 2064	369,272	6,118,301	29,188,880	0	0	0	23,781	23,781
July 1, 2065	23,781	5,897,990	30,682,116	0	0	0	1,531	1,531
July 1, 2066	1,531	5,676,098	32,265,485	0	0	0	99	99
July 1, 2067	99	5,445,296	33,914,886	0	0	0	6	6
July 1, 2068	6	5,206,175	35,642,822	0	0	0	0	0
July 1, 2069	0	4,959,563	37,459,539	0	0	0	0	0
July 1, 2070	0	4,707,832	39,371,608	0	0	0	0	0
July 1, 2071	0	4,451,724	41,383,593	0	0	0	0	0
July 1, 2072	0	4,194,353	43,505,568	0	0	0	0	0
July 1, 2073	0	3,975,459	45,784,232	0	0	0	0	0
July 1, 2074	0	3,762,486	48,188,670	0	0	0	0	0
July 1, 2075	0	3,542,118	50,705,281	0	0	0	0	0
July 1, 2076	0	3,316,546	53,346,827	0	0	0	0	0
July 1, 2077	0	3,086,900	56,117,467	0	0	0	0	0
July 1, 2078	0	2,855,914	59,020,933	0	0	0	0	0
July 1, 2079	0	2,625,498	62,069,520	0	0	0	0	0
July 1, 2080	0	2,397,929	65,277,177	0	0	0	0	0
July 1, 2081	0	2,176,034	68,651,360	0	0	0	0	0
July 1, 2082	0	1,960,097	72,206,251	0	0	0	0	0
July 1, 2083	0	1,753,128	75,956,204	0	0	0	0	0
July 1, 2084	0	1,555,469	79,908,906	0	0	0	0	0
July 1, 2085	0	1,369,346	84,073,380	0	0	0	0	0
July 1, 2086	0	1,195,164	88,464,737	0	0	0	0	0
July 1, 2087	0	1,034,307	93,095,463	0	0	0	0	0
July 1, 2088	0	886,425	97,971,324	0	0	0	0	0
July 1, 2089	0	752,176	103,110,942	0	0	0	0	0
July 1, 2090	0	631,733	108,526,493	0	0	0	0	0
July 1, 2091	0	524,711	114,233,214	0	0	0	0	0
July 1, 2092	0	431,026	120,245,873	0	0	0	0	0
July 1, 2093	0	350,302	126,581,597	0	0	0	0	0
July 1, 2094	0	281,357	133,254,307	0	0	0	0	0
July 1, 2095	0	223,385	140,279,069	0	0	0	0	0

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FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

20. PLAN 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	Beginning Fiduciary Net Position for Current Plan		Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Equivalent Discount Rate
	Members	Benefit Payments					
July 1, 2017	2,286,510	2,042,259	2,042,259	0	2,042,259	0	2,042,259
July 1, 2018	3,559,027	2,465,971	2,465,971	0	2,316,771	0	2,330,254
July 1, 2019	4,463,982	2,658,773	2,658,773	0	2,346,775	0	2,374,171
July 1, 2020	5,934,090	2,799,263	2,799,263	0	2,321,288	0	2,362,053
July 1, 2021	7,650,107	2,950,093	2,950,093	0	2,298,350	0	2,352,323
July 1, 2022	9,630,029	3,118,034	3,118,034	0	2,282,215	0	2,349,403
July 1, 2023	11,893,909	3,348,075	3,348,075	0	2,302,322	0	2,383,895
July 1, 2024	14,266,123	3,555,130	3,555,130	0	2,296,791	0	2,392,009
July 1, 2025	16,756,143	3,809,172	3,809,172	0	2,312,020	0	2,421,883
July 1, 2026	19,377,606	4,115,244	4,115,244	0	2,346,669	0	2,472,484
July 1, 2027	22,128,008	4,428,212	4,428,212	0	2,372,355	0	2,514,095
July 1, 2028	25,019,869	4,772,119	4,772,119	0	2,401,916	0	2,560,235
July 1, 2029	28,052,332	5,216,311	5,216,311	0	2,466,636	0	2,644,523
July 1, 2030	31,191,359	5,623,532	5,623,532	0	2,498,308	0	2,694,067
July 1, 2031	34,419,809	5,999,101	5,999,101	0	2,503,906	0	2,715,818
July 1, 2032	37,711,384	6,430,438	6,430,438	0	2,521,550	0	2,750,872
July 1, 2033	41,041,455	6,857,557	6,857,557	0	2,526,339	0	2,772,137
July 1, 2034	44,385,011	7,065,658	7,065,658	0	2,445,513	0	2,699,064
July 1, 2035	47,767,364	7,322,447	7,322,447	0	2,381,051	0	2,643,212
July 1, 2036	51,171,287	7,506,034	7,506,034	0	2,293,074	0	2,560,364
July 1, 2037	54,581,888	7,647,551	7,647,551	0	2,194,952	0	2,465,068
July 1, 2038	58,024,559	7,808,778	7,808,778	0	2,105,624	0	2,378,510
July 1, 2039	61,477,470	8,075,007	8,075,007	0	2,045,671	0	2,324,235
July 1, 2040	64,891,155	8,170,912	8,170,912	0	1,944,727	0	2,222,404
July 1, 2041	68,186,347	8,327,589	8,327,589	0	1,862,098	0	2,140,361
July 1, 2042	71,283,905	8,521,230	8,521,230	0	1,790,114	0	2,069,595
July 1, 2043	74,091,523	8,589,203	8,589,203	0	1,695,221	0	1,971,294
July 1, 2044	76,524,572	8,587,160	8,587,160	0	1,592,275	0	1,862,359
July 1, 2045	78,632,215	8,540,160	8,540,160	0	1,487,749	0	1,750,230
July 1, 2046	80,343,687	8,544,305	8,544,305	0	1,398,414	0	1,654,707
July 1, 2047	81,595,658	8,365,361	8,365,361	0	1,286,289	0	1,530,892
July 1, 2048	82,391,164	8,320,215	8,320,215	0	1,201,943	0	1,438,830
July 1, 2049	82,122,076	8,222,419	8,222,419	0	1,115,948	0	1,343,662
July 1, 2050	81,222,976	8,067,128	8,067,128	0	1,028,628	0	1,245,732
July 1, 2051	79,582,547	7,961,353	7,961,353	0	953,721	0	1,161,737
July 1, 2052	77,084,552	7,863,872	7,863,872	0	885,047	0	1,084,358
July 1, 2053	73,596,937	7,776,606	7,776,606	0	822,271	0	1,013,309
July 1, 2054	68,979,019	7,724,901	7,724,901	0	767,384	0	951,174
July 1, 2055	63,148,904	7,628,363	7,628,363	0	711,945	0	887,593
July 1, 2056	55,963,817	7,467,211	7,467,211	0	654,740	0	821,024

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Actuarial Present Values of Projected Benefit Payments using a July 1, 2017 Valuation Date (Continued)							
For the Period Ending on the Measurement Date	Beginning		Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Equivalent Discount Rate
	Fiduciary Net Position for Current Plan Members	Benefit Payments					
July 1, 2057	47,277,843	7,335,692	7,335,692	0	604,291	0	762,174
July 1, 2058	39,950,997	7,193,835	7,193,835	0	556,751	0	706,299
July 1, 2059	32,762,437	7,002,133	7,002,133	0	509,127	0	649,642
July 1, 2060	25,763,111	6,854,492	6,854,492	0	468,237	0	600,944
July 1, 2061	18,910,024	6,690,623	6,690,623	0	429,391	0	554,295
July 1, 2062	12,219,956	6,486,076	6,486,076	0	391,078	0	507,775
July 1, 2063	5,734,040	6,309,396	6,309,396	0	357,408	0	466,759
July 1, 2064	369,272	6,118,301	1,880,300	4,238,001	100,069	996,488	427,712
July 1, 2065	23,781	5,897,990	1,589,768	4,308,222	79,488	982,274	389,619
July 1, 2066	1,531	5,676,098	1,509,197	4,166,901	70,894	921,237	354,324
July 1, 2067	99	5,445,296	1,414,445	4,030,851	62,423	864,129	321,209
July 1, 2068	6	5,206,175	1,380,923	3,825,252	57,256	795,180	290,202
July 1, 2069	0	4,959,563	1,313,686	3,645,877	51,173	734,905	261,240
July 1, 2070	0	4,707,832	1,244,375	3,463,457	45,540	676,960	234,333
July 1, 2071	0	4,451,724	1,174,287	3,277,437	40,375	621,171	209,390
July 1, 2072	0	4,194,353	1,104,039	3,090,314	35,663	567,940	186,427
July 1, 2073	0	3,975,459	1,043,699	2,931,760	31,674	522,459	166,973
July 1, 2074	0	3,762,486	988,605	2,773,881	28,187	479,331	149,330
July 1, 2075	0	3,542,118	932,209	2,609,909	24,971	437,317	132,847
July 1, 2076	0	3,316,546	873,522	2,443,024	21,983	396,938	117,541
July 1, 2077	0	3,086,900	813,446	2,273,454	19,233	358,183	103,381
July 1, 2078	0	2,855,914	752,699	2,103,215	16,720	321,311	90,382
July 1, 2079	0	2,625,498	691,710	1,933,788	14,435	286,467	78,517
July 1, 2080	0	2,397,929	631,364	1,766,565	12,379	253,758	67,764
July 1, 2081	0	2,176,034	572,688	1,603,346	10,549	223,326	58,109
July 1, 2082	0	1,960,097	515,619	1,444,478	8,923	195,096	49,462
July 1, 2083	0	1,753,128	461,060	1,292,068	7,496	169,218	41,805
July 1, 2084	0	1,555,469	409,166	1,146,303	6,250	145,574	35,050
July 1, 2085	0	1,369,346	360,399	1,008,947	5,172	124,244	29,158
July 1, 2086	0	1,195,164	314,787	880,377	4,244	105,124	24,048
July 1, 2087	0	1,034,307	272,704	761,603	3,454	88,183	19,666
July 1, 2088	0	886,425	234,044	652,381	2,785	73,245	15,927
July 1, 2089	0	752,176	198,886	553,290	2,224	60,236	12,771
July 1, 2090	0	631,733	167,323	464,410	1,758	49,026	10,136
July 1, 2091	0	524,711	139,234	385,477	1,374	39,459	7,955
July 1, 2092	0	431,026	114,603	316,423	1,063	31,408	6,175
July 1, 2093	0	350,302	93,336	256,966	813	24,733	4,742
July 1, 2094	0	281,357	75,134	206,223	615	19,247	3,599
July 1, 2095	0	223,385	59,790	163,595	460	14,805	2,701

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

21. CHANGES TO NET OPEB EXPENSE

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of differences between expected & actual experience								
Fiscal Year	Differences between actual & expected experience		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	Recognition Period (years)							
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	(1,966,821)	6.81	(288,814)	(288,814)	(288,814)	(288,814)	(288,814)	(288,814)
2019								
Net increase (decrease) in OPEB expense			(288,814)	(288,814)	(288,814)	(288,814)	(288,814)	(288,814)

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

21. CHANGES TO NET OPEB EXPENSE (CONTINUED)

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of Changes in Assumptions								
Fiscal Year	Differences from changes in		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	Actuarial Assumptions	Recognition Period (years)						
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	0	6.81	0	0	0	0	0	0
2019								
Net increase (decrease) in OPEB expense			0	0	0	0	0	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

21. CHANGES TO 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 Year	Differences between actual & expected earnings	Recognition Period (years)	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	30,498	5.00	6,100	6,100	6,100	6,100	6,098	0
2019	265,874	5.00		<u>53,175</u>	<u>53,175</u>	<u>53,175</u>	<u>53,175</u>	<u>53,174</u>
Net increase (decrease) in OPEB expense			6,100	59,275	59,275	59,275	59,273	53,174

EXHIBIT A

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 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, July 1, 2017.

Actuarial Assumptions:

Investment Rate of Return: 6.44%, net of OPEB plan investment expense, including inflation.

Municipal Bond Rate 3.13% as of July 1, 2017 (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 July 1, 2017 and for future periods

Salary Increases: 3.00% annually as of July 1, 2017 and for future periods

Cost of Living Adjustment: Not Applicable

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

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

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

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):Plan Membership

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

Changes in Assumptions: Effective July 1, 2017

- Discount rate is 5.75% previously 6.00%

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources Arising between Expected & Actual Experience					
Fiscal Year	Experience Losses	Experience Gains	Amounts recognized in OPEB Expense through June 30, 2018	Balances at June 30, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	(1,966,821)	(288,814)	0	(1,678,007)
Total				0	(1,678,007)

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Changes of Assumptions					
Fiscal Year	Increase in the Total OPEB Liability	Decrease in the Total OPEB Liability	Amounts recognized in OPEB Expense through June 30, 2018	Balances at June 30, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	0	0	0	0
Total				0	0

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources between Projected & Actual Earnings on OPEB Plan Investments					
Fiscal Year	Increase in the Total OPEB Liability	Decrease in the Total OPEB Liability	Amounts recognized in OPEB Expense through June 30, 2018	Balances at June 30, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	30,498	0	6,100	24,398	0
Total				24,398	0

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources related to OPEB as of June 30, 2018		
	Deferred Outflows of Resources	Deferred Inflows of Resources
I. Differences between actual & expected experience	0	(1,678,007)
II. Changes of assumptions	0	0
III. Net difference between projected & actual earnings on OPEB plan investments	<u>24,398</u>	<u>0</u>
IV. Total [I.+II.+III.]	24,398	(1,678,007)
Year ended June 30:		
	2019	(282,714)
	2020	(282,714)
	2021	(282,714)
	2022	(282,716)
	2023	(288,814)
	Thereafter	(233,937)

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):Contributions:

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town contributed \$1,120,254 beyond the pay-as-you-go cost for the period ending on the July 1, 2017 Measurement Date. For the year ending on the July 1, 2017 Measurement Date total Town premiums plus implicit costs for the retiree medical program were \$2,042,259 .

EXHIBIT C

PLAN DEMOGRAPHICS

(As of the July 1, 2017 Valuation Date)

ACTIVE EMPLOYEES

Valuation Date	<u>July 1, 2017</u>	<u>July 1, 2016</u>
A. Average Age at Hire	37.24	37.06
B. Average Service	<u>9.59</u>	<u>9.39</u>
C. Average Current Age	46.83	46.45

RETIRED EMPLOYEES & DEPENDENTS

	<u>July 1, 2017</u>	<u>July 1, 2016</u>
I. Retirees		
A. Under Age 65	51	53
B. Age 65 & Over	<u>274</u>	<u>260</u>
C. Total Retirees	325	313
II. Dependents of Retirees		
A. Under Age 65	34	39
B. Age 65 & Over	<u>143</u>	<u>129</u>
C. Total Retirees	177	168
III. Retirees & Dependents		
A. Under Age 65	85	92
B. Age 65 & Over	<u>417</u>	<u>389</u>
C. Total Retirees	502	481

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Total Medical, Dental & Life Insurance - 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 expected 6.44% return		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.]
			III. Net OPEB Liability (Asset) [I. - II.]						
2018	July 1, 2017	71,725,416	3,559,027	68,166,389	4.96%	2,623,099	2,042,259	1,120,254	3,162,513
2019	July 1, 2018	76,391,404	4,554,552	71,836,852	5.96%	2,695,924	2,245,506	1,000,485	3,245,991
2020	July 1, 2019	81,257,413	6,254,053	75,003,360	7.70%	2,864,929	2,485,694	1,362,984	3,848,678
2021	July 1, 2020	85,783,923	8,370,199	77,413,724	9.76%	3,005,941	2,709,299	1,660,743	4,370,042
2022	July 1, 2021	90,889,121	10,969,974	79,919,147	12.07%	3,154,407	2,893,050	1,997,421	4,890,471
2023	July 1, 2022	96,236,838	14,129,135	82,107,703	14.68%	3,313,931	3,097,605	2,377,339	5,474,944
2024	July 1, 2023	101,803,374	17,614,381	84,188,993	17.30%	3,480,895	3,348,075	2,496,206	5,844,281
2025	July 1, 2024	107,653,062	21,452,843	86,200,219	19.93%	3,659,817	3,555,130	2,621,016	6,176,146
2026	July 1, 2025	113,734,134	25,673,707	88,060,427	22.57%	3,834,304	3,809,172	2,752,067	6,561,239
2027	July 1, 2026	120,054,579	30,308,359	89,746,220	25.25%	4,019,944	4,115,244	2,889,670	7,004,914
2028	July 1, 2027	126,582,848	35,390,547	91,192,301	27.96%	4,195,839	4,428,212	3,034,154	7,462,366
2029	July 1, 2028	133,282,049	40,956,545	92,325,504	30.73%	4,406,240	4,772,119	3,185,862	7,957,981
2030	July 1, 2029	140,041,195	47,045,335	92,995,860	33.59%	4,592,178	5,256,131	3,345,155	8,601,286
2031	July 1, 2030	146,848,402	53,698,803	93,149,599	36.57%	4,801,939	5,728,039	3,512,413	9,240,452
2032	July 1, 2031	153,677,439	60,961,942	92,715,497	39.67%	5,032,393	6,197,396	3,688,034	9,885,430
2033	July 1, 2032	160,543,905	68,883,074	91,660,831	42.91%	5,269,131	6,754,149	3,872,436	10,626,585
2034	July 1, 2033	167,773,194	77,514,086	90,259,108	46.20%	5,520,216	7,336,008	4,066,058	11,402,066
2035	July 1, 2034	175,138,722	86,910,683	88,228,039	49.62%	5,795,110	7,668,098	4,269,361	11,937,459
2036	July 1, 2035	182,795,012	97,132,655	85,662,357	53.14%	6,068,203	8,071,413	4,482,829	12,554,242
2037	July 1, 2036	190,860,708	108,244,168	82,616,540	56.71%	6,370,390	8,419,527	4,706,970	13,126,497
2038	July 1, 2037	199,530,653	120,314,071	79,216,582	60.30%	6,689,329	8,701,389	4,942,319	13,643,708
2039	July 1, 2038	208,416,809	133,416,225	75,000,584	64.01%	7,029,513	9,021,216	5,189,435	14,210,651
2040	July 1, 2039	217,597,113	147,629,854	69,967,259	67.85%	7,360,125	9,501,845	5,448,907	14,950,752
2041	July 1, 2040	227,356,263	163,039,922	64,316,341	71.71%	7,740,786	9,887,449	5,721,352	15,608,801
2042	July 1, 2041	237,608,740	179,737,534	57,871,206	75.64%	8,135,312	10,409,165	6,007,420	16,416,585
2043	July 1, 2042	248,341,805	197,820,364	50,521,441	79.66%	8,565,125	11,047,983	6,307,791	17,355,774
2044	July 1, 2043	259,620,775	217,393,116	42,227,659	83.73%	9,016,436	11,633,358	6,623,181	18,256,539
2045	July 1, 2044	271,436,389	238,568,009	32,868,380	87.89%	9,496,909	12,071,618	6,954,340	19,025,958
2046	July 1, 2045	284,070,671	261,465,304	22,605,367	92.04%	9,995,553	12,521,915	7,302,057	19,823,972
2047	July 1, 2046	297,614,963	286,213,860	11,401,103	96.17%	10,525,707	13,067,922	7,667,160	20,735,082
2048	July 1, 2047	312,021,019	312,951,733	(930,714)	100.30%	11,086,178	13,392,184	8,050,518	21,442,702
2049	July 1, 2048	327,327,692	332,145,609	(4,817,917)	101.47%	11,663,424	13,895,294	(930,714)	12,964,580

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Total Medical, Dental & Life Insurance - 6.50% discount rate increasing at 0.00% 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		IV Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
			Position as of Measurement Date with expected 6.44% return	III. Net OPEB (Asset) ("NOL") [I. - II.]					
2018	July 1, 2017	64,661,507	3,559,027	61,102,480	5.50%	2,203,385	2,042,259	1,120,254	3,162,513
2019	July 1, 2018	68,914,196	4,554,552	64,359,644	6.61%	2,264,558	2,245,506	3,267,951	5,513,457
2020	July 1, 2019	73,338,783	8,219,402	65,119,381	11.21%	2,411,761	2,485,694	3,267,951	5,753,645
2021	July 1, 2020	77,941,010	12,120,269	65,820,741	15.55%	2,534,065	2,709,299	3,267,951	5,977,250
2022	July 1, 2021	82,783,715	16,272,352	66,511,363	19.66%	2,661,982	2,893,050	3,267,951	6,161,001
2023	July 1, 2022	87,871,095	20,691,829	67,179,266	23.55%	2,799,145	3,097,605	3,267,951	6,365,556
2024	July 1, 2023	93,172,404	25,395,920	67,776,484	27.26%	2,941,769	3,348,075	3,267,951	6,616,026
2025	July 1, 2024	98,761,776	30,402,955	68,358,821	30.78%	3,094,393	3,555,130	3,267,951	6,823,081
2026	July 1, 2025	104,585,737	35,732,443	68,853,294	34.17%	3,242,478	3,809,172	3,267,951	7,077,123
2027	July 1, 2026	110,640,781	41,405,150	69,235,631	37.42%	3,400,290	4,115,244	3,267,951	7,383,195
2028	July 1, 2027	116,901,410	47,443,179	69,458,231	40.58%	3,547,750	4,428,212	3,267,951	7,696,163
2029	July 1, 2028	123,322,629	53,870,057	69,452,572	43.68%	3,725,366	4,772,119	3,267,951	8,040,070
2030	July 1, 2029	129,773,383	60,710,826	69,062,557	46.78%	3,879,010	5,256,131	3,267,951	8,524,082
2031	July 1, 2030	136,234,922	67,992,140	68,242,782	49.91%	4,052,666	5,728,039	3,267,951	8,995,990
2032	July 1, 2031	142,674,879	75,742,371	66,932,508	53.09%	4,243,959	6,197,396	3,267,951	9,465,347
2033	July 1, 2032	149,083,045	83,991,717	65,091,328	56.34%	4,440,209	6,754,149	3,267,951	10,022,100
2034	July 1, 2033	155,760,057	92,772,321	62,987,736	59.56%	4,648,785	7,336,008	3,267,951	10,603,959
2035	July 1, 2034	162,546,759	102,118,396	60,428,363	62.82%	4,878,537	7,668,098	3,267,951	10,936,049
2036	July 1, 2035	169,574,432	112,066,358	57,508,074	66.09%	5,105,945	8,071,413	3,267,951	11,339,364
2037	July 1, 2036	176,962,723	122,654,969	54,307,754	69.31%	5,358,084	8,419,527	3,267,951	11,687,478
2038	July 1, 2037	184,932,936	133,925,486	51,007,450	72.42%	5,624,887	8,701,389	3,267,951	11,969,340
2039	July 1, 2038	193,109,046	145,921,825	47,187,221	75.56%	5,909,808	9,021,216	3,267,951	12,289,167
2040	July 1, 2039	201,529,174	158,690,728	42,838,446	78.74%	6,185,202	9,501,845	3,267,951	12,769,796
2041	July 1, 2040	210,497,932	172,281,948	38,215,984	81.84%	6,502,996	9,887,449	3,267,951	13,155,400
2042	July 1, 2041	219,875,701	186,748,443	33,127,258	84.93%	6,832,740	10,409,165	3,267,951	13,677,116
2043	July 1, 2042	229,620,161	202,146,580	27,473,581	88.04%	7,192,407	11,047,983	3,267,951	14,315,934
2044	July 1, 2043	239,803,069	218,536,357	21,266,712	91.13%	7,569,896	11,633,358	3,267,951	14,901,309
2045	July 1, 2044	250,479,259	235,981,636	14,497,623	94.21%	7,971,552	12,071,618	3,267,951	15,339,569
2046	July 1, 2045	261,886,824	254,550,391	7,336,433	97.20%	8,388,282	12,521,915	3,267,951	15,789,866
2047	July 1, 2046	274,091,155	274,314,973	(223,818)	100.08%	8,830,606	13,067,922	(223,818)	12,844,104
2048	July 1, 2047	287,132,992	291,749,945	(4,616,953)	101.61%	9,297,803	13,392,184	(4,616,953)	8,775,231
2049	July 1, 2048	301,008,308	305,775,342	(4,767,034)	101.58%	9,778,708	13,895,294	(4,767,034)	9,128,260

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Total Medical, Dental & Life Insurance - 6.50% discount rate and 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 Position as of Measurement Date with expected 6.44% return		IV Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
			II. Fiduciary Net Liability ("NOL") [I. - II.]	III. Net OPEB (Asset)					
2018	July 1, 2017	64,661,507	3,559,027	61,102,480	5.50%	2,203,385	2,042,259	1,120,254	3,162,513
2019	July 1, 2018	68,914,196	4,554,552	64,359,644	6.61%	2,264,558	2,245,506	2,674,562	4,920,068
2020	July 1, 2019	73,338,783	7,607,204	65,731,579	10.37%	2,411,761	2,485,694	2,754,799	5,240,493
2021	July 1, 2020	77,941,010	10,939,228	67,001,782	14.04%	2,534,065	2,709,299	2,837,443	5,546,742
2022	July 1, 2021	82,783,715	14,571,098	68,212,617	17.60%	2,661,982	2,893,050	2,922,566	5,815,616
2023	July 1, 2022	87,871,095	18,524,681	69,346,414	21.08%	2,799,145	3,097,605	3,010,243	6,107,848
2024	July 1, 2023	93,172,404	22,823,331	70,349,073	24.50%	2,941,769	3,348,075	3,100,550	6,448,625
2025	July 1, 2024	98,761,776	27,491,984	71,269,792	27.84%	3,094,393	3,555,130	3,193,567	6,748,697
2026	July 1, 2025	104,585,737	32,557,263	72,028,474	31.13%	3,242,478	3,809,172	3,289,374	7,098,546
2027	July 1, 2026	110,640,781	38,047,590	72,593,191	34.39%	3,400,290	4,115,244	3,388,055	7,503,299
2028	July 1, 2027	116,901,410	43,993,303	72,908,107	37.63%	3,547,750	4,428,212	3,489,697	7,917,909
2029	July 1, 2028	123,322,629	50,426,784	72,895,845	40.89%	3,725,366	4,772,119	3,594,388	8,366,507
2030	July 1, 2029	129,773,383	57,382,590	72,390,793	44.22%	3,879,010	5,256,131	3,702,220	8,958,351
2031	July 1, 2030	136,234,922	64,897,600	71,337,322	47.64%	4,052,666	5,728,039	3,813,287	9,541,326
2032	July 1, 2031	142,674,879	73,011,165	69,663,714	51.17%	4,243,959	6,197,396	3,927,686	10,125,082
2033	July 1, 2032	149,083,045	81,765,268	67,317,777	54.85%	4,440,209	6,754,149	4,045,517	10,799,666
2034	July 1, 2033	155,760,057	91,204,702	64,555,355	58.55%	4,648,785	7,336,008	4,166,883	11,502,891
2035	July 1, 2034	162,546,759	101,377,248	61,169,511	62.37%	4,878,537	7,668,098	4,291,889	11,959,987
2036	July 1, 2035	169,574,432	112,333,874	57,240,558	66.24%	5,105,945	8,071,413	4,420,646	12,492,059
2037	July 1, 2036	176,962,723	124,128,945	52,833,778	70.14%	5,358,084	8,419,527	4,553,265	12,972,792
2038	July 1, 2037	184,932,936	136,820,442	48,112,494	73.98%	5,624,887	8,701,389	4,689,863	13,391,252
2039	July 1, 2038	193,109,046	150,470,199	42,638,847	77.92%	5,909,808	9,021,216	4,830,559	13,851,775
2040	July 1, 2039	201,529,174	165,144,156	36,385,018	81.95%	6,185,202	9,501,845	4,975,476	14,477,321
2041	July 1, 2040	210,497,932	180,912,626	29,585,306	85.95%	6,502,996	9,887,449	5,124,740	15,012,189
2042	July 1, 2041	219,875,701	197,850,581	22,025,120	89.98%	6,832,740	10,409,165	5,278,482	15,687,647
2043	July 1, 2042	229,620,161	216,037,956	13,582,205	94.08%	7,192,407	11,047,983	5,436,836	16,484,819
2044	July 1, 2043	239,803,069	235,559,971	4,243,098	98.23%	7,569,896	11,633,358	4,243,098	15,876,456
2045	July 1, 2044	250,479,259	255,107,627	(4,628,368)	101.85%	7,971,552	12,071,618	(4,628,368)	7,443,250
2046	July 1, 2045	261,886,824	266,761,482	(4,874,658)	101.86%	8,388,282	12,521,915	(4,874,658)	7,647,257
2047	July 1, 2046	274,091,155	278,911,748	(4,820,593)	101.76%	8,830,606	13,067,922	(4,820,593)	8,247,329
2048	July 1, 2047	287,132,992	291,900,270	(4,767,278)	101.66%	9,297,803	13,392,184	(4,767,278)	8,624,906
2049	July 1, 2048	301,008,308	305,780,258	(4,771,950)	101.59%	9,778,708	13,895,294	(4,771,950)	9,123,344

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Town of Westford

OPEB Projection of Funding Annual Service Cost and Impact on Unfunded Obligation

Total Medical, Dental & Life Insurance - Funding Annual Service Cost - 5.75% discount rate

Measurement Date	I. Total OPEB		III. Employer	IV. Funding	V. Total	VI. Present	VII. Present	VIII. Present	IX. Fiduciary	X. Net OPEB	XI. Present
	Liability	II. Service Cost	Share of			Funding Costs	Value at 3.00%				
			Premiums /	beyond	[III. + IV.]	of Employer	3.00% of	3.00% of	Net Position at	Liability	Value at 3.00%
			Claims	claims		Share of	Funding	Total Funding	Beginning of	[I. - IX.]	of Net OPEB
			including			Premiums /	Service Cost	Costs	year		Liability (Asset)
			"implicit cost"			Claims including	beyond	[VI. + VII.]			(Asset)
July 1, 2017	71,725,416	2,623,099	2,042,259	580,840	2,623,099	2,042,259	580,840	2,623,099	3,559,027	68,166,389	68,166,389
July 1, 2018	76,391,404	2,695,924	2,245,506	450,418	2,695,924	2,180,103	437,299	2,617,402	4,344,511	72,046,893	69,948,440
July 1, 2019	81,257,413	2,864,929	2,485,694	379,235	2,864,929	2,343,005	357,465	2,700,470	5,044,738	76,212,675	71,837,756
July 1, 2020	85,783,923	3,005,941	2,709,299	296,642	3,005,941	2,479,392	271,469	2,750,861	5,714,045	80,069,878	73,275,281
July 1, 2021	90,889,121	3,154,407	2,893,050	261,357	3,154,407	2,570,437	232,212	2,802,649	6,339,245	84,549,876	75,121,470
July 1, 2022	96,236,838	3,313,931	3,097,605	216,326	3,313,931	2,672,021	186,605	2,858,626	6,965,109	89,271,729	77,006,578
July 1, 2023	101,803,374	3,480,895	3,348,075	132,820	3,480,895	2,803,960	111,235	2,915,195	7,581,929	94,221,445	78,908,977
July 1, 2024	107,653,062	3,659,817	3,555,130	104,687	3,659,817	2,890,646	85,120	2,975,766	8,150,710	99,502,352	80,904,518
July 1, 2025	113,734,134	3,834,304	3,809,172	25,132	3,834,304	3,006,996	19,839	3,026,835	8,724,063	105,010,071	82,895,920
July 1, 2026	120,054,579	4,019,944	4,115,244	(95,300)	4,019,944	3,153,992	(73,040)	3,080,952	9,250,829	110,803,750	84,921,848
July 1, 2027	126,582,848	4,195,839	4,428,212	(232,373)	4,195,839	3,295,006	(172,907)	3,122,099	9,687,452	116,895,396	86,981,153
July 1, 2028	133,282,049	4,406,240	4,772,119	(365,879)	4,406,240	3,447,480	(264,319)	3,183,161	10,012,107	123,269,942	89,052,829
July 1, 2029	140,041,195	4,592,178	5,256,131	(663,953)	4,592,178	3,686,545	(465,683)	3,220,862	10,221,924	129,819,271	91,052,625
July 1, 2030	146,848,402	4,801,939	5,728,039	(926,100)	4,801,939	3,900,516	(630,629)	3,269,887	10,145,732	136,702,670	93,087,866
July 1, 2031	153,677,439	5,032,393	6,197,396	(1,165,003)	5,032,393	4,097,209	(770,204)	3,327,005	9,803,012	143,874,427	95,117,945
July 1, 2032	160,543,905	5,269,131	6,754,149	(1,485,018)	5,269,131	4,335,231	(953,177)	3,382,054	9,201,682	151,342,223	97,140,814
July 1, 2033	167,773,194	5,520,216	7,336,008	(1,815,792)	5,520,216	4,571,558	(1,131,542)	3,440,016	8,245,761	159,527,433	99,412,222
July 1, 2034	175,138,722	5,795,110	7,668,098	(1,872,988)	5,795,110	4,639,325	(1,133,189)	3,506,136	6,904,100	168,234,622	101,784,713
July 1, 2035	182,795,012	6,068,203	8,071,413	(2,003,210)	6,068,203	4,741,104	(1,176,675)	3,564,429	5,428,098	177,366,914	104,184,369
July 1, 2036	190,860,708	6,370,390	8,419,527	(2,049,137)	6,370,390	4,801,539	(1,168,594)	3,632,945	3,737,004	187,123,704	106,714,034
July 1, 2037	199,530,653	6,689,329	8,701,389	(2,012,060)	6,689,329	4,817,748	(1,114,029)	3,703,719	1,902,745	197,627,908	109,421,781
July 1, 2038	208,416,809	7,029,513	9,021,216	(1,991,703)	7,029,513	4,849,348	(1,070,639)	3,778,709	93	208,416,716	112,034,255
July 1, 2039	217,597,113	7,360,125	9,501,845	(2,141,720)	7,360,125	4,958,942	(1,117,748)	3,841,194	0	217,597,113	113,562,301
July 1, 2040	227,356,263	7,740,786	9,887,449	(2,146,663)	7,740,786	5,009,889	(1,087,696)	3,922,193	0	227,356,263	115,199,542
July 1, 2041	237,608,740	8,135,312	10,409,165	(2,273,853)	8,135,312	5,120,619	(1,118,585)	4,002,034	0	237,608,740	116,887,755
July 1, 2042	248,341,805	8,565,125	11,047,983	(2,482,858)	8,565,125	5,276,578	(1,185,827)	4,090,751	0	248,341,805	118,609,429
July 1, 2043	259,620,775	9,016,436	11,633,358	(2,616,922)	9,016,436	5,394,327	(1,213,453)	4,180,874	0	259,620,775	120,384,785
July 1, 2044	271,436,389	9,496,909	12,071,618	(2,574,709)	9,496,909	5,434,510	(1,159,106)	4,275,404	0	271,436,389	122,197,692
July 1, 2045	284,070,671	9,995,553	12,521,915	(2,526,362)	9,995,553	5,473,038	(1,104,214)	4,368,824	0	284,070,671	124,160,687
July 1, 2046	297,614,963	10,525,707	13,067,922	(2,542,215)	10,525,707	5,545,325	(1,078,780)	4,466,545	0	297,614,963	126,291,827
July 1, 2047	312,021,019	11,086,178	13,392,184	(2,306,006)	11,086,178	5,517,402	(950,044)	4,567,358	0	312,021,019	128,548,529

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Total Medical & Life Insurance - Funding

Measurement Date	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"
July 1, 2017	502	71,725,416	71,725,416	2,042,259	2,042,259
July 1, 2018	542	76,391,404	74,166,412	2,245,506	2,180,103
July 1, 2019	569	81,257,413	76,592,905	2,485,694	2,343,005
July 1, 2020	593	85,783,923	78,504,442	2,709,299	2,479,392
July 1, 2021	616	90,889,121	80,753,807	2,893,050	2,570,437
July 1, 2022	635	96,236,838	83,014,742	3,097,605	2,672,021
July 1, 2023	656	101,803,374	85,258,723	3,348,075	2,803,960
July 1, 2024	674	107,653,062	87,531,791	3,555,130	2,890,646
July 1, 2025	693	113,734,134	89,782,776	3,809,172	3,006,996
July 1, 2026	711	120,054,579	92,011,838	4,115,244	3,153,992
July 1, 2027	735	126,582,848	94,189,527	4,428,212	3,295,006
July 1, 2028	758	133,282,049	96,285,788	4,772,119	3,447,480
July 1, 2029	783	140,041,195	98,222,077	5,256,131	3,686,545
July 1, 2030	808	146,848,402	99,996,616	5,728,039	3,900,516
July 1, 2031	832	153,677,439	101,598,891	6,197,396	4,097,209
July 1, 2032	853	160,543,905	103,047,024	6,754,149	4,335,231
July 1, 2033	871	167,773,194	104,550,708	7,336,008	4,571,558
July 1, 2034	886	175,138,722	105,961,807	7,668,098	4,639,325
July 1, 2035	899	182,795,012	107,372,804	8,071,413	4,741,104
July 1, 2036	911	190,860,708	108,845,195	8,419,527	4,801,539
July 1, 2037	920	199,530,653	110,475,285	8,701,389	4,817,748
July 1, 2038	927	208,416,809	112,034,305	9,021,216	4,849,348
July 1, 2039	935	217,597,113	113,562,301	9,501,845	4,958,942
July 1, 2040	942	227,356,263	115,199,542	9,887,449	5,009,889
July 1, 2041	949	237,608,740	116,887,755	10,409,165	5,120,619
July 1, 2042	955	248,341,805	118,609,429	11,047,983	5,276,578
July 1, 2043	961	259,620,775	120,384,785	11,633,358	5,394,327
July 1, 2044	966	271,436,389	122,197,692	12,071,618	5,434,510
July 1, 2045	970	284,070,671	124,160,687	12,521,915	5,473,038
July 1, 2046	973	297,614,963	126,291,827	13,067,922	5,545,325
July 1, 2047	976	312,021,019	128,548,529	13,392,184	5,517,402
July 1, 2048	979	327,327,692	130,926,869	13,895,294	5,557,939
July 1, 2049	982	343,584,887	133,426,736	14,410,181	5,596,007
July 1, 2050	985	361,021,588	136,114,614	14,938,317	5,632,138
July 1, 2051	989	379,405,726	138,879,531	15,584,464	5,704,614
July 1, 2052	992	398,965,588	141,785,746	16,315,732	5,798,340
July 1, 2053	996	419,628,428	144,785,414	17,134,167	5,911,843
July 1, 2054	999	441,367,276	147,850,506	17,997,265	6,028,777
July 1, 2055	1,001	464,449,897	151,051,253	18,880,239	6,140,347
July 1, 2056	1,004	488,974,778	154,395,520	19,757,255	6,238,423

EXHIBIT E

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.

Fiduciary Net Position - The value of cash, investments, other assets and property belonging to an OPEB trust.

GASB - Government Accounting Standards Board. "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 post employment benefits.

EXHIBIT E**GLOSSARY***(continued)*

Net OPEB Liability (NOL) - Total OPEB Liability less the Fiduciary Net Position.

Other Post Employment 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.